HCD-H51/H51M

SERVICE MANUAL

HCD-H51 and HCD-H51M are the tuner, deck, CD and amplifier section in FH-B510 and MHC-510 respectively.

HCD-H51M destined for UK does not include speaker system that is supplied separately.

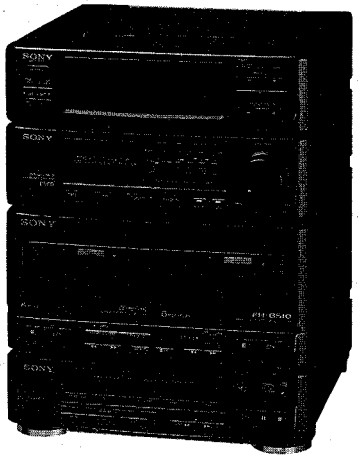


Photo : HCD-H51

US Model
Canadian Model
UK Model
HCD-H51M
AEP Model
HCD-H51/H51M

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (For the customers in the USA Model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION :
With 6 ohm loads, both channels driven, from 60 Hz-20 kHz ; rated 20 watts per channel minimum RMS power, with no more than 1 % total harmonic distortion from 250 miliwatts to reted output.

Tuner section
FM stereo, FM/AM superheterodyne tuner

FM tuner section
Tuning range
East European model : 65.0-74.0 MHz
87.5-108.0 MHz
Other country model : 87.5-108.0 MHz
Antenna FM lead antenna (for HCD-H51M)
Telescopic antenna (for HCD-H51)
Antenna terminals 75 ohm unbalanced
Intermediate frequency 10.7 MHz

AM tuner section
Tuning range
US and Canadian model
AM : 530-1,710 kHz
Italian model
AM : 522 – 1,611 kHz

CD Section	Model Name Using Similer Mechanism	HCD-H170/H170K/H700
	CD Mechanism Name	CDM13B-5BD4E
	Base Unit Name	BU-5BD4E
Deck Section	Model Name Using Similar Mechanism	HST-H1750
	Tape Transport Mechanism Type	TCM-210W2

UK, East European, AEP, Germany, AED and CIS model
MW : 531-1,602 kHz
LW : 153-279 kHz
Antenna AM loop antenna
External antenna terminals
Intermediate frequency 450 kHz

Amplifier section
For UK, East European, AEP, Germany, Italian, AED and CIS model :
Continuous RMS power output :
25 + 25 watts (6 ohms at 1 kHz, DIN)
30 + 30 watts (6 ohms at 1 kHz, 5 % THD)
Music power output :
75 + 75 watts
(6 ohms at 1 kHz, 10 % THD)
For US and Canadian model :
Continuous RMS power output :
30 + 30 watts
(6 ohms at 1 kHz, 5 % THD)
For Australian model :
Continuous RMS power output :
30 + 30 watts
(6 ohms at 1 kHz, 5 % THD)
Peak music power output :
300 watts
Inputs
For HCD-H51 PHONO (phono jack) : sensitivity 5 mV, impedance 47 kirohms
For HCD-H51M UK, AEP and AED model: PHONO (phono jack) : sensitivity 5 mV, impedance 47 kilohms
Outputs
HEADPHONES (stereo minijack) : accept headphones of 8 ohms or more.
SPEAKERS : accept impedence of 6 to 16 ohms.

Cassette deck section
Recording system
4-track 2-channel stereo
Frequency response
(DOLBY NR OFF)
60-13,000 Hz (± 3 db), using TYPE I cassette (Sony HF-S)
60-14,000 Hz (± 3 dB), using TYPE II cassette (Sony UX-S)
Wow and flutter
0.1 % WRMS ± 0.3 % (DIN)

Compact disk player section
System Compact disk digital audio system
Laser Semiconductor laser
Wavelength 780 – 790 nm

Note : AED : Denmark model

—Continued on next page—

MICROFILM

COMPACT DISK DECK RECEIVER

SONY®

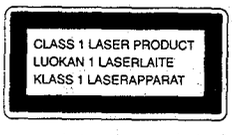
General

Destination	Power requirements	Power consumption
US	120 V AC, 60Hz	80 W
Canadian		90W
UK	240 V AC, 50 Hz	90W
East European	220-230 V AC, 50/60 Hz	90W
AEP		
Germany		
Italian		
CIS		
AED		

Dimensions
Approx. 255 × 285 × 265 mm
(w/h/d) ($8^{7}/_{8} \times 11^{1}/_{4} \times 10^{1}/_{2}$ inches)
incl. projecting parts and controls
Mass Approx. 5.5 kg (12 lb 2 oz)

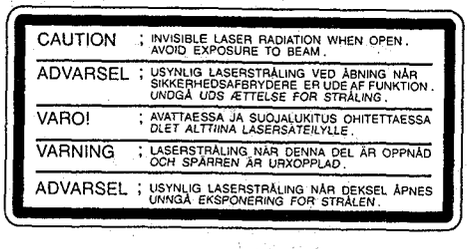
Design and specifications subject to Change without notice.

Note :
AED : Denmark model



This appliance is classified as a CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

The following caution label is located inside the unit.


CAUTION ; INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL ; USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARO! ; AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA LASERSÄTEILYLLE.
VARNING ; LASERSTRÅLING NÄR DENNA DEL ÄR OPPNAD OCH SPÄRREN ÄR URKOPPLAD.
ADVARSEL ; USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

Section Title Page

1. SERVICING NOTE 3

2. GENERAL 5

3. DISASSEMBLY 6

4. MECHANICAL ADJUSTMENTS 9

5. ELECTRICAL ADJUSTMENTS 9

6. DIAGRAMS

6-1. Semiconductor Lead Layouts 15
6-2. Circuit Boards Lcation 16
6-3. Printed Wiring Boards — Main Section — 17
6-4. Schematic Diagram — BD Section — 21
6-5. Schematic Diagram — Main Section — 25
6-6. Schematic Diagram — Tuner Section — 29
6-7. Printed Wiring Boards — Display Section — 34
6-8. Schematic Diagram — Display Section — 37

7. EXPLODED VIEWS

7-1. Case, Power Board Section 43
7-2. Front Panel, Main Board Section 44
7-3. Mechanism Section-1 (TCM-210W2) 45
7-4. Mechanism Section-2 (TCM-210W2) 46
7-5. CD Section-1 (CDM12B-5BD4E) 47
7-6. CD Section-2 (BU-5BD4E) 48

8. ELECTRICAL PARTS LIST 49

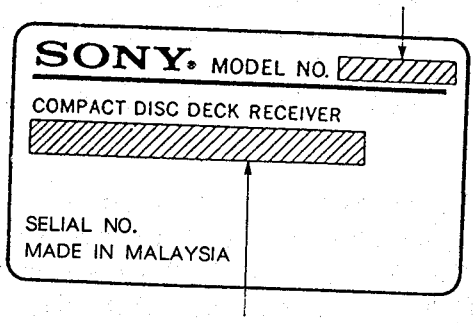
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
SERVICING NOTE

MODEL IDENTIFICATION
— Specification Labels —

HCD-H51
HCD-H51M



AEP, Germany, Italian, East European, CIS, AED model : AC : 220-230V~ 50/60Hz 90W
US model : AC : 120V 60Hz 80W
Canadian model : AC : 120V 60Hz 90W
UK model : AC : 240V~ 50Hz 90W

On operating voltage
Before operating the stereo system, check that the operating voltage of your system is identical with the voltage of your local power supply.

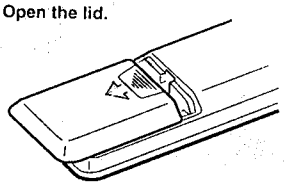
US and Canadian model	120 V AC, 60 Hz
AEP, Germany, Italian, East European, CIS, AED model	220-230 V AC, 50/60 Hz
U.K. model	240 V AC, 50 Hz

Note : AED : Denmark model

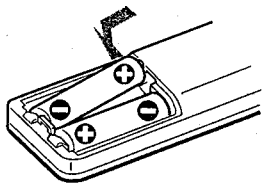
Battery Installation

Install two R6 (size AA) batteries in the supplied remote commander for remote control operation.

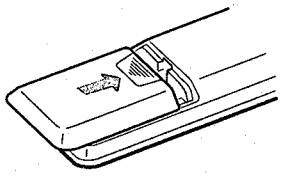
1 **Open the lid.**



2 **Insert two R6 (size AA) batteries by matching the + and – on the batteries to the + and – indications in the battery compartment.**



3 **Close the lid.**

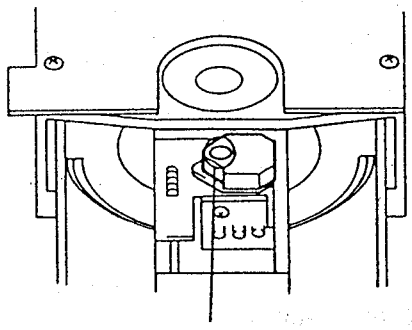


Battery life
About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries. When the batteries are exhausted, the commander cannot operate the stereo system. When this happens, replace all the batteries with new ones.

To avoid battery leakage
If the commander is not to be used for a long time, remove the batteries to avoid damage caused by battery leakage and corrosion.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objecting lens.



❶ Confirm that laser beam is spread.
❷ Up and down motion of the objective lens. (3 times)

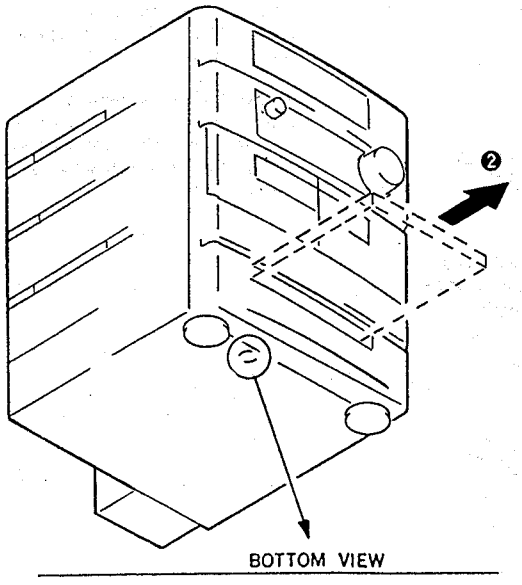
NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

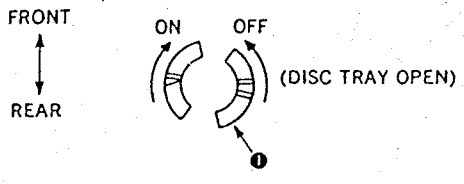
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF

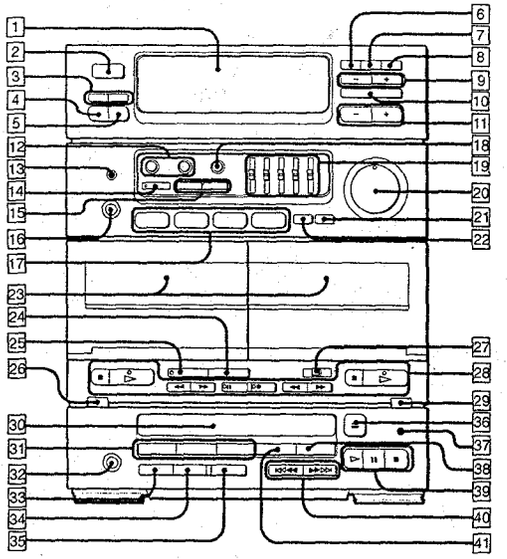




(1) Insert to ❶ for tapering driver, etc., and turn in the direction of arrow OFF. (Disc tray open)
(2) Tray as come out little of front panel, pull out in the direction of arrow ❷ by hand.

Parts Identification

Refer to the pages indicated in parenthesis for use of the buttons.



Front Panel

Tuner Section

1 Display window
2 POWER ON/STANDBY switch
3 CLOCK SET buttons (8)
TIMER SET button (8, 19)
CLOCK DISPLAY button (8)
4 TIMER CONT (control) button (21)
5 SLEEP button (20)
6 MEMORY/NEXT button (14, 19)
7 AUTO button (13)
8 MODE button (13)
9 TUNING –/+ buttons (13)
10 BAND button (13)
11 PRESET/TIMER –/+ buttons (14, 19)

Amplifier section

12 MIC 1 LEVEL and MIC 2 LEVEL controls (only for FH-B500K) (20)
13 MIX MIC 1 jack (only for FH-B500K) (20)
14 KARAOKE PON button and indicator (only for FH-B500/B500K) (21)
15 MULTIPLEX buttons (only for FH-B500K) (21)
MAIN button and indicator
SUB button and indicator
16 MIX MIC jack (only for MHC-510 for USA and Canada and FH-B500) (21)
MIX MIC 2 jack (only for FH-B500K) (20)
17 Function selecting buttons
Pressing these buttons with the power turned off automatically turns on the power, and selects the function.
18 DIGITAL ECHO control (only for FH-B500K) (20)
19 Graphic equalizer controls (8)
20 VOLUME control (8)
21 DBFB button and indicator (8)
22 S-SUR (simulated surround) button and indicator (8)

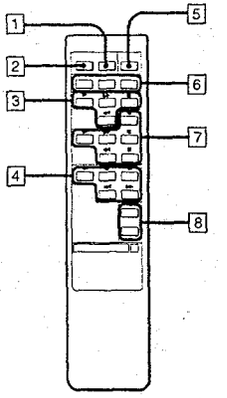
Cassette deck section

23 Cassette holders
24 CD SYNCHRO (synchronized) button (17, 18, 19)
25 HIGH SPEED DUBBING button and indicator (16)
26 ⏏ (eject) button (for deck A) (14)
27 DOLBY NR selector (15)
28 Tape operating buttons (14 – 19)
▷: Play button and indicator, ▶▶: Fast forward button, ◀◀: Rewind button, ■: Stop button, ●REC: Record button and indicator (for deck B only), ❚❚ PAUSE: Pause button and indicator (for deck B only)
29 ⏏ (eject) button (for deck B) (15)

CD player section

30 Disc tray
31 PLAY MODE button
CONTINUE button (10, 11, 12)
SHUFFLE button (10, 11)
PROGRAM button (11, 12)
32 HEADPHONES jack (8)
33 CHECK button (11, 12)
34 CLEAR button (11, 12)
35 EDIT button (17, 18)
36 ⏏ OPEN/CLOSE button (9)
37 Remote sensor
38 TIME button (9)
39 CD player operating buttons (9 – 12, 16 – 20)
▷: Play button, ❚❚: Pause button, ■: Stop button
40 I◁◁◀/▶▶▷▷I (manual search/AMS*) buttons (10, 11, 12, 17, 18)
41 REPEAT button (10)

** AMS is the abbreviation of Automatic Music Sensor.*



Remote commander

1 SLEEP button (20)
2 FUNCTION button
3 Deck A operating buttons
▶: Play button
▶▶: Fast forward button
◀◀: Rewind button
■: Stop button
4 CD operating buttons
▶: Play button
I◀◀/▶▶I: AMS* buttons
❚❚: pause button
■: Stop button
5 SYSTEM POWER button
6 Tuner operating buttons
BAND button (13)
PRESET – buton (14)
PRESET + button (14)
7 Deck B operating buttons
▶: Play button
▶▶: Fast forward button
◀◀: Rewind button
❚❚: pause button
■: Stop button
●REC: Record button
8 VOL (volume) +/– buttons (8)

** AMS is the abbreviation of Automatic Music Sensor.*

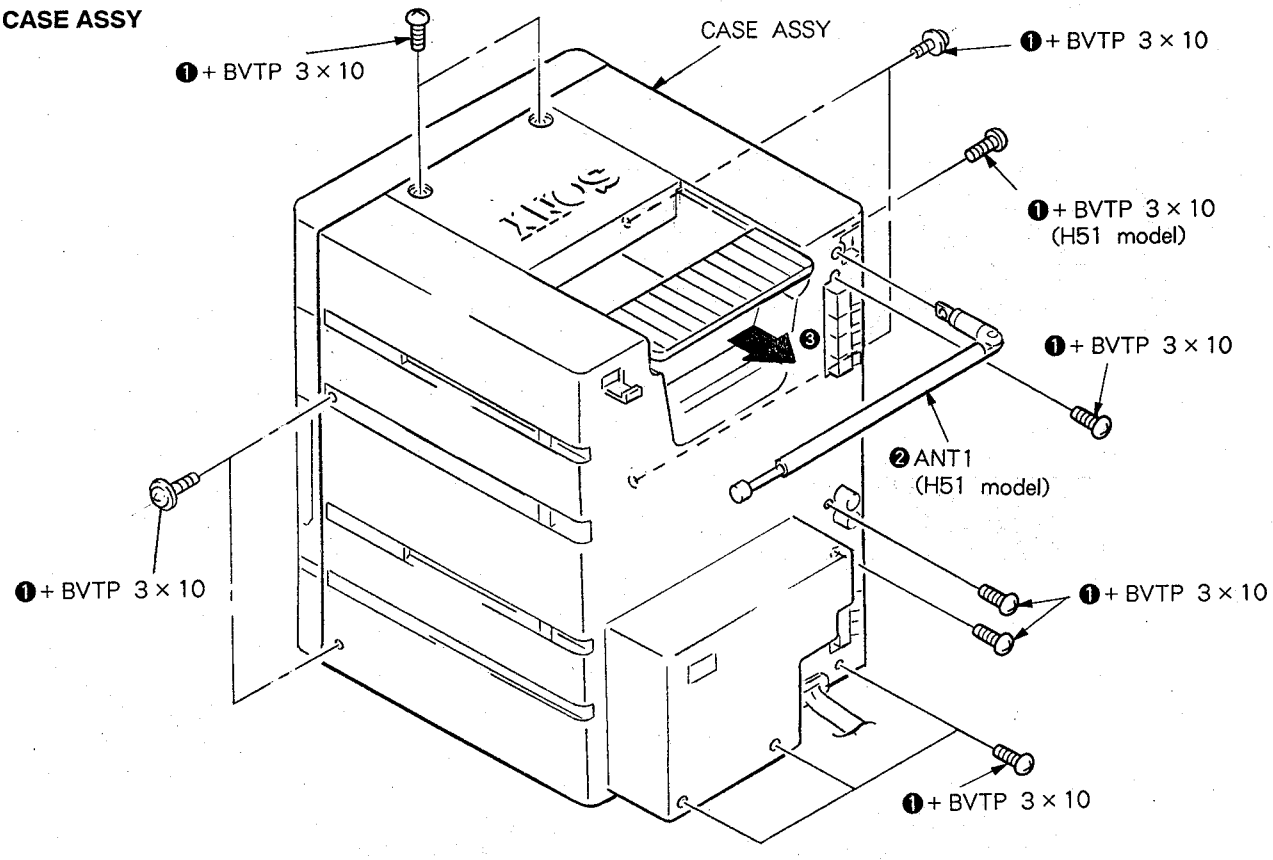
SECTION 2
GENERAL

This section is extracted from instruction manual.

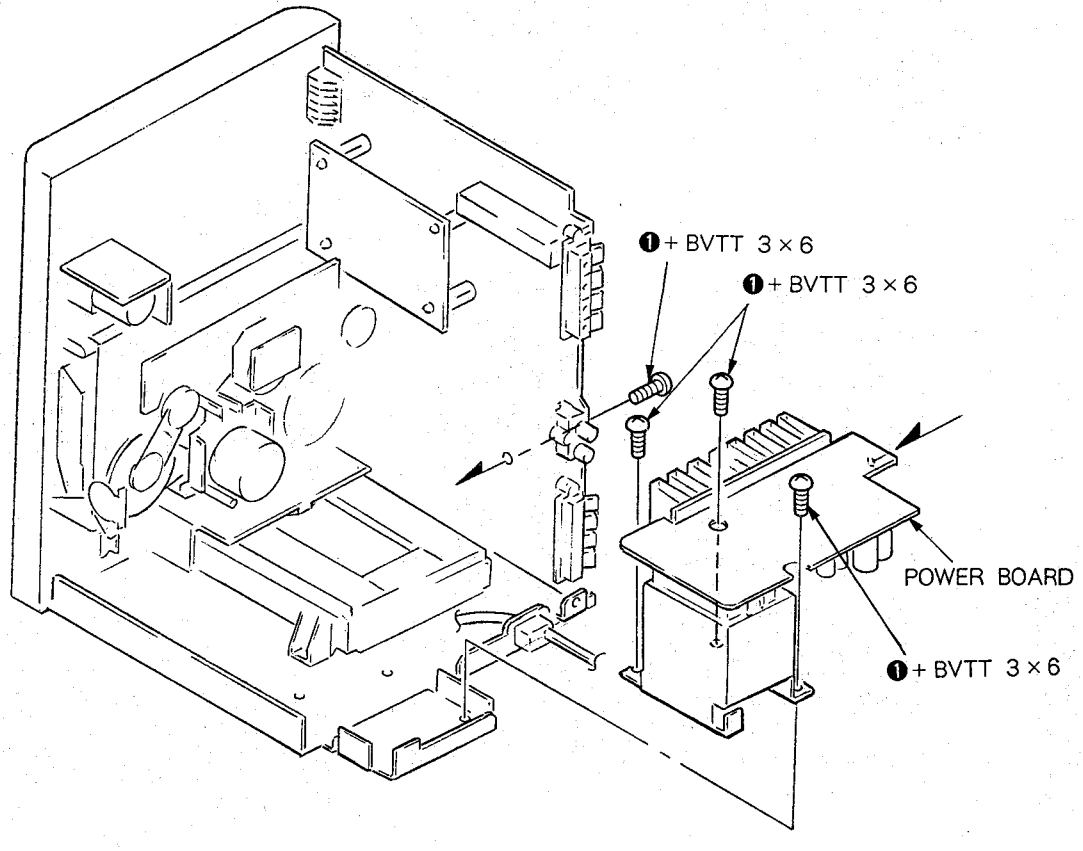
SECTION 3
DISASSEMBLY

NOTE : Follow the disassembly procedure in the numerical order given.

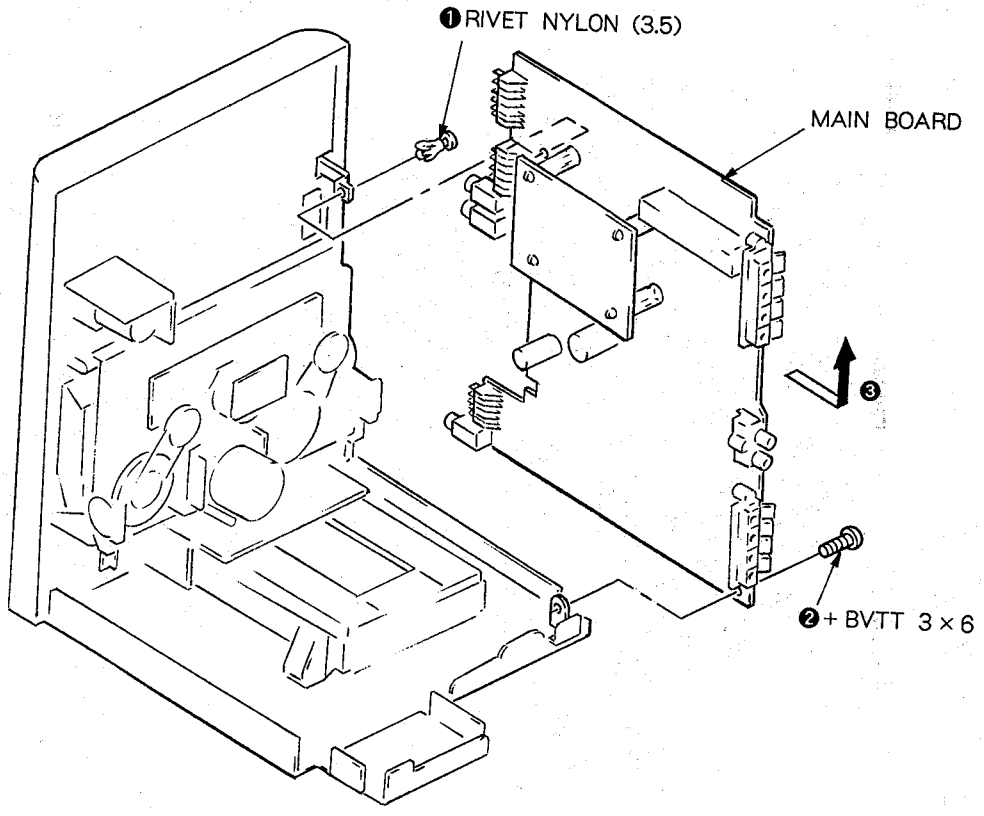
3-1. CASE ASSY



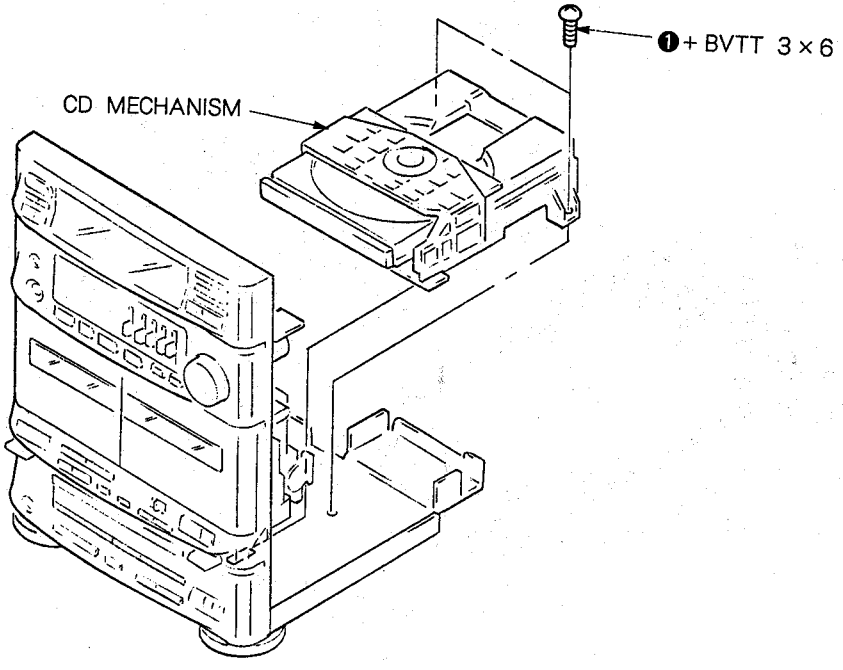
3-2. POWER BOARD



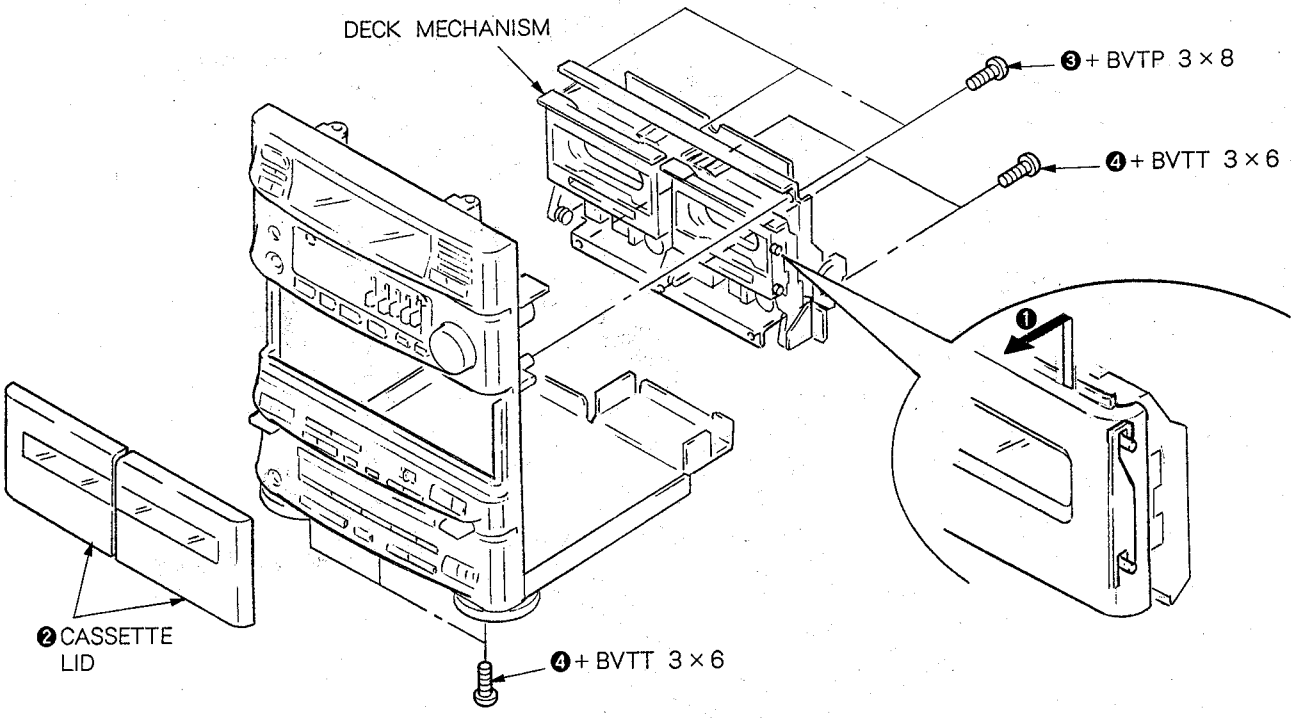
3-3. MAIN BOARD



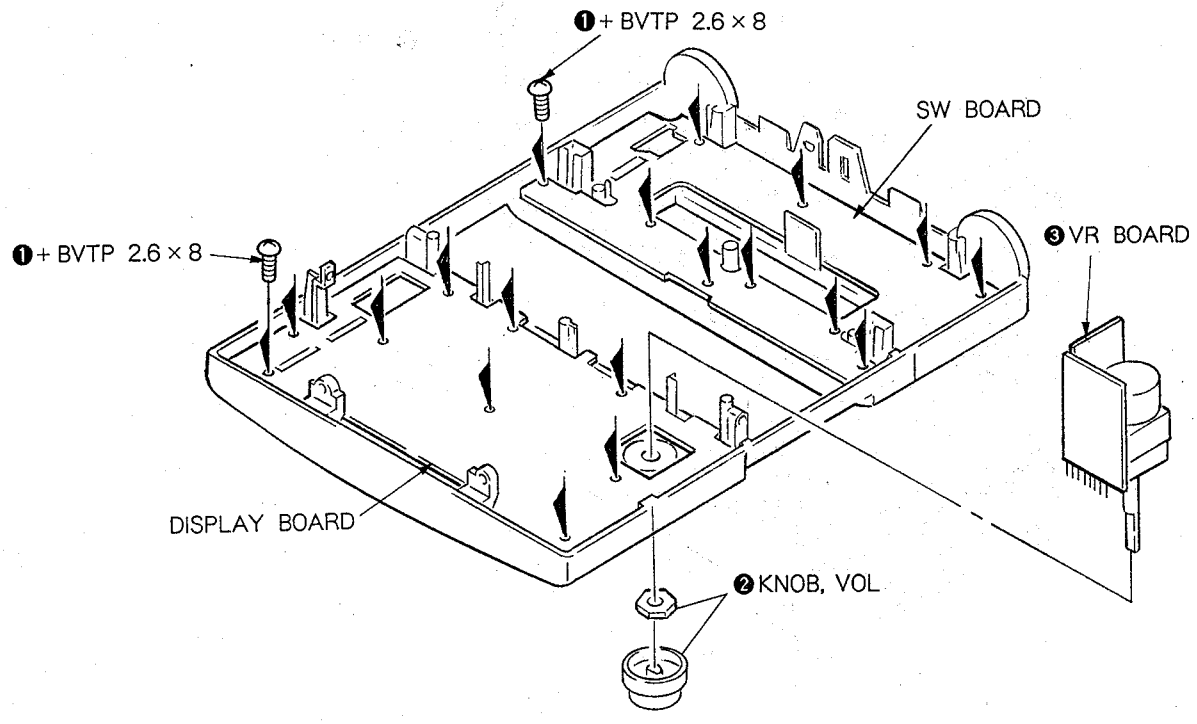
3-4. CD MECHANISM BLOCK



3-5. DECK MECHANISM BLOCK



3-6. DISPLAY/SW/VR BOARD



SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab :
   record/playback head, erase head, capstan, pinch roller, rubber belt, idler
2. Demagnetize the record/playback head with a head demagnetizer.
   (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustment should be performed with the rated power supply voltage unless otherwise noted.

• Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	35 to 60g • cm (0.49 to 0.83oz • inch)
Forward back tension	CQ-102C	2 to 4.5g • cm (0.028 to 0.063oz • inch)
FF/REW	CQ-201B	70 to 150g • cm (0.98 to 2.1oz • inch)

• Tape Driving Force Measurement

Mode	Torque meter	Meter reading
FWD	CQ-403A	More tham 110g (3.1oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

DECK SECTION

• Servicing Note

1. Connect short plug to TP201 before electric adjustment.
2. After DECK electric adjustment, disconnect a TP201.

Note:

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.

• Switch position

TAPE switch (S503) : TAPE
DOLBY NR switch (S371) : OFF
GEQ Volume (RV601) : 12kHz MAX
(RV602-604) : EXCEPT 12kHz CENTER

• Test Tape

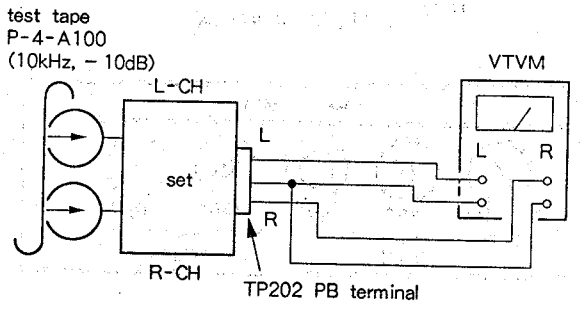
Torque	Torque meter	Meter reading
P-4-A100	10kH, – 10dB	Head Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

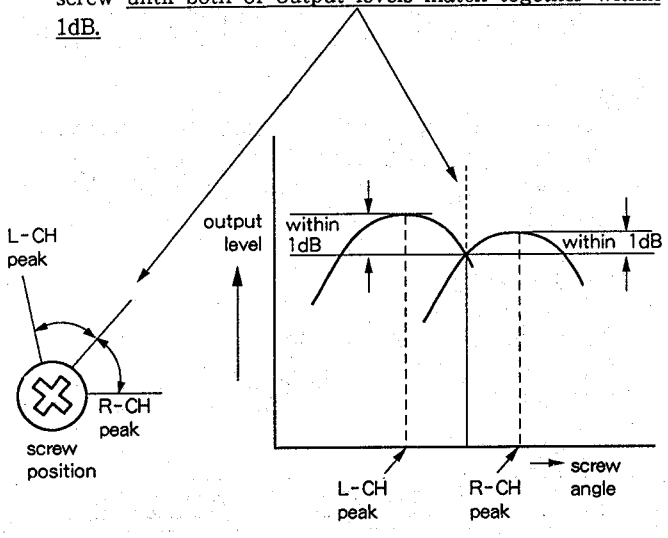
DECK A **DECK B**

Procedure:

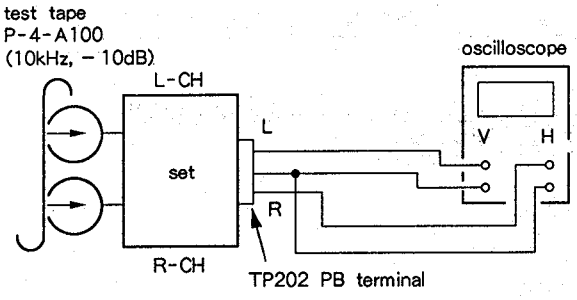
1. Playback Mode

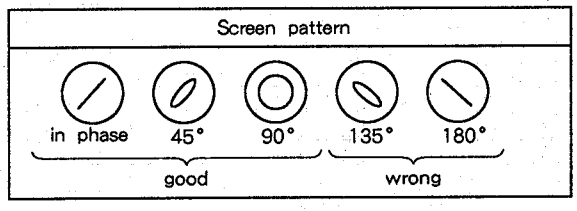


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



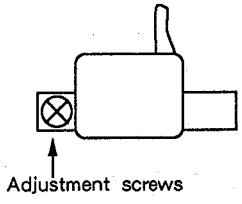
3. Playback Mode





4. Change the review playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location:
– record/playback head (deck A and B) –



Tape Speed Adjustment DECK A

Procedure:

- Perform high speed adjustment before normal speed adjustment.

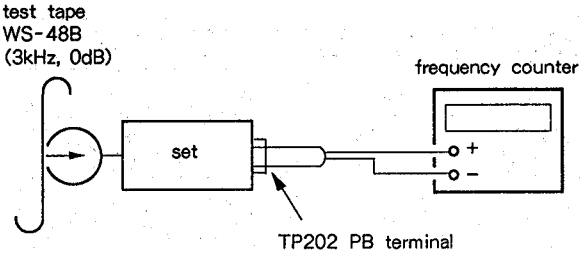
- High Speed Adjustment

1. After push the FWD button, pressing the HIGH SPEED DUBBING button (S386).
2. Set to FWD playback mode.
3. Adjust RV371 on Main board so that the frequency counter reading becomes 5700Hz ± 20Hz.

- Normal Speed Adjustment

1. Set the FWD playback mode.
2. Adjust RV372 on Main board so that the frequency counter reading becomes 3000Hz ± 10Hz.

Mode : playback

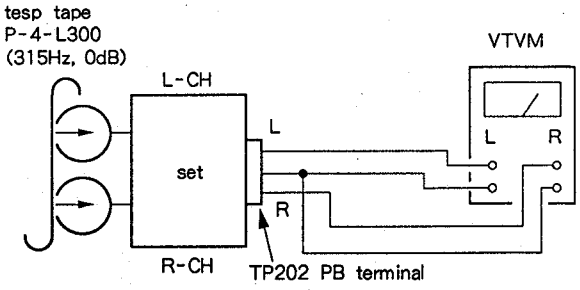


Adjustment Location: main board

Playback Level Adjustment DECK A DECK B

Procedure:

Mode : playback



Deck A is RV321 (L-CH) and RV421 (R-CH), deck B is RV331 (L-CH) and RV431B (R-CH) so that adjustment within adjustment level as follows.

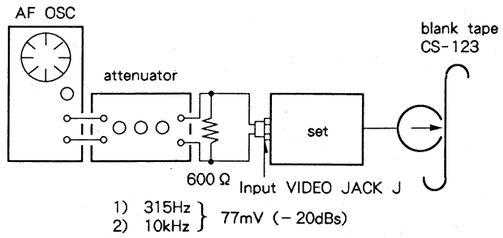
Adjusment Level :
PB OUT level : – 6.5dBs to – 5.5dBs (0.36 to 0.41V)
Level Difference between Channels : within 0.5dB

Adjustment Location: main board

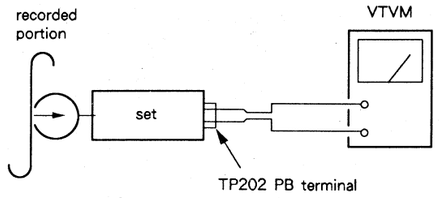
Record Bias Adjustment DECK B

Procedure:

1. record mode



2. playback mode



Confirm playback the signal recorded in step 1 become adjustment level as follows.
If these levels do not adjustment level, adjustment the RV351 (L-CH) and RV451 (R-CH) to repeat step 1 and 2.

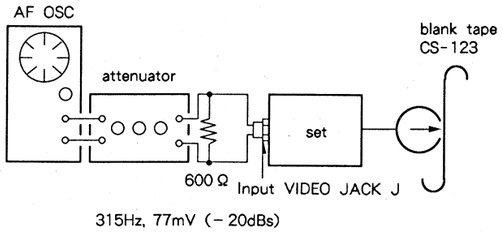
Adjustment level : Playback output of 315Hz to playback output of 10kHz : – 0.5dB to 0.5dB.

Adjustment Location: main board

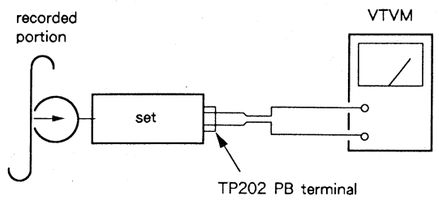
Record Level Adjustment DECK B

Procedure:

1. record mode



2. playback mode



Confirm playback the signal recorded in step become adjustment level as follows.
If these levels do not adjustment level, adjustment the RV341 (L-CH) and RV441 (R-CH) to repeat step 1 and 2.

Adjustment Location:
PB OUT level : – 26dBs ± 0.5dBs (0.036 to 0.041V)

Adjustment Location: main board

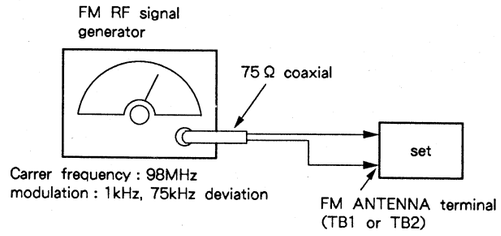
Adjustment Location:
[MECHANISM DECK] – rear side –

Note: As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

TUNER SECTION

FM SECTION ADJUSTMENTS

Setting:



• TUNNER OUT CHECK POINT

Speaker out receive 98MHz 60dB μ (1mV) and set the SP out to 10dBs by VOLUME.

SP load : 6 Ω both CH

FM Tuned Indication Lighting Level Adjustment

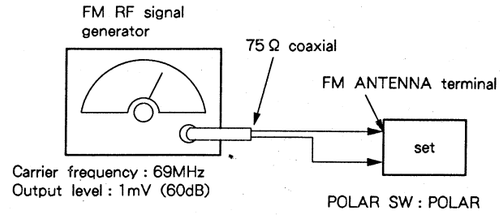
Band : FM

Procedure:

1. Supply a 24 ± 1 μV (25 ± 4dB μ) 98MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust RV51 so that the FL501 TUNED light up.

Adjustment Location: main board

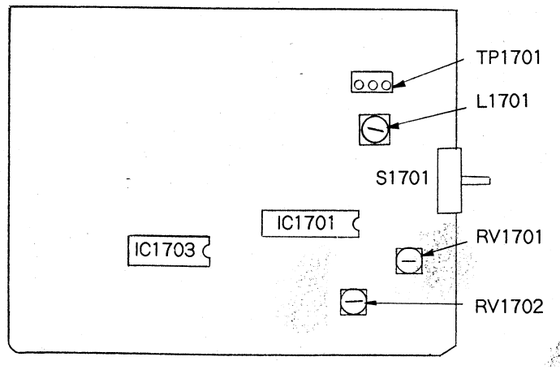
FM POLAR Adjustment (CIS model only)



1. Connect the frequency counter to the TP-1702 and adjust the RV1702 for a frequency of 31.25 ± 50Mz.
2. Connect the VTVM to the TP1701, receive the signal of 89MHz ± 1kHz (10kz dev.) and adjust the L1701 so that the reading of theVTVM is 0dB.
3. Set the modulation frequency of the FM RF signal generator to 31.25kHz (10kHz dev.) and adjust the L1701 so that the reading of the VTVM is 0dB.
4. Adjust the RV1701 so that the reading of the VTVM to 14dB.
5. Check that the separation between Pins 1 and 3 of the CN1701 is more than 18dB.
6. Select the Polar Switch to the pilot side and check that the "STEREO LAMP" goes out.

• Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by trimmer capacitors.

Adjustment Location:
[MAIN BOARD] – component side –

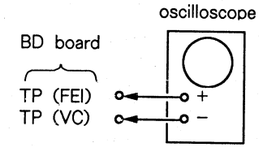


CD SECTION

Note:

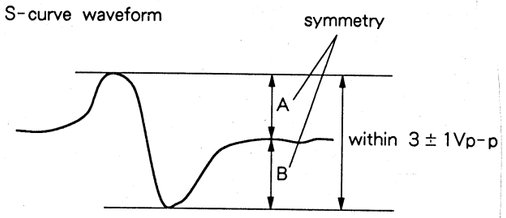
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10M Ω impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



Procedure:

1. Connect oscilloscope to test point TP (FEI) on BD board.
2. Connect between test point TP (FE) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3 ± 1Vp-p.



5. After check, remove the lead wire connected in step 2.

Note:

1. Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
2. Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Ch

Procedure:
1. Connect
2. Turn Pov
3. Put disc
4. Confirm
RF signa

Note:
Clear RF sigr
be clearly di

RF signa

E-F Balance

Procedure:
1. Connect t
to TP (V
2. Connect
board.
3. Turn Pow
4. Put disc
5. Confirm t
on the to
level.

Traverse wav
0V

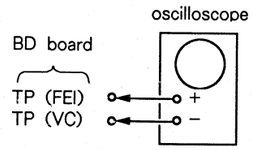
6. Remove t

CD SECTION

Note:

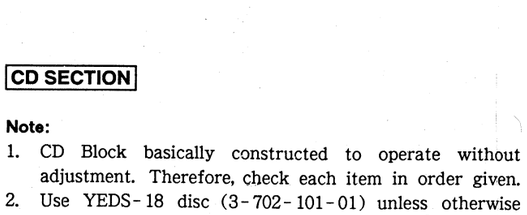
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



Procedure:

1. Connect oscilloscope to test point TP (FEI) on BD board.
2. Connect between test point TP (FE) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3 ± 1Vp-p.

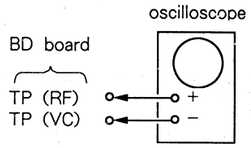


5. After check, remove the lead wire connected in step 2.

Note:

1. Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
2. Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

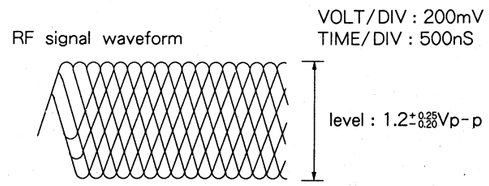


Procedure:

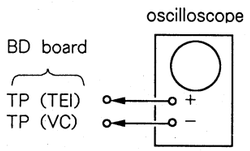
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note:

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

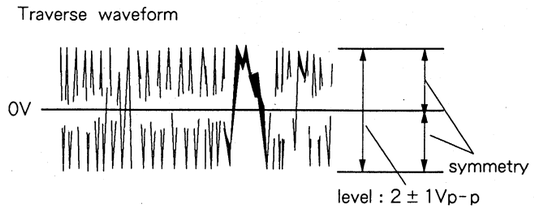


E-F Balance Check



Procedure:

1. Connect test point TP (ADJ) to ground and TP (TEO) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEI) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

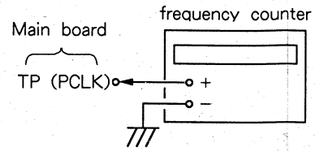


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure:

1. Connect frequency counter to test point (PCLK) with lead wire.



2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.
Therefore, do no perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Location:

[BD BOARD] – Conductor side –

Adjustment Location:

[MAIN BOARD] – Conductor side –

TUNER FM TUNED INDICATION LIGHT LEVEL ADJ
RV51

DECK A PLAYBACK LEVEL ADJ
RV321 (L-CH)
RV421 (R-CH)

DECK B PLAYBACK LEVEL ADJ
RV331 (L-CH)
RV431 (R-CH)

DECK B RECORD BIAS ADJ
RV351 (L-CH)
RV451 (R-CH)

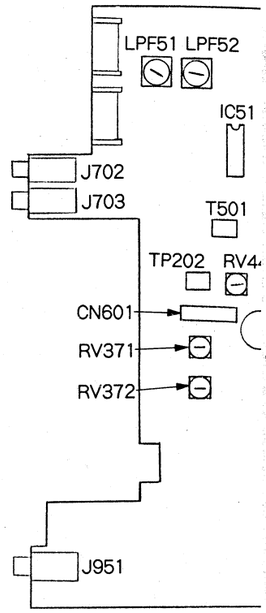
DECK B RECORD LEVEL ADJ
RV341 (L-CH)
RV441 (R-CH)

DECK A TAPE SPEED ADJ
RV371 (HIGH)
RV372 (NORMAL)

TUNER OUT
L-CH
R-CH

SW OSC VOLTAGE ADJ
CV1
CV2
T1

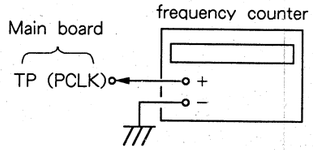
T2



RF PLL Free-run Frequency Check

Procedure:

1. Connect frequency counter to test point (PCLK) with lead wire.



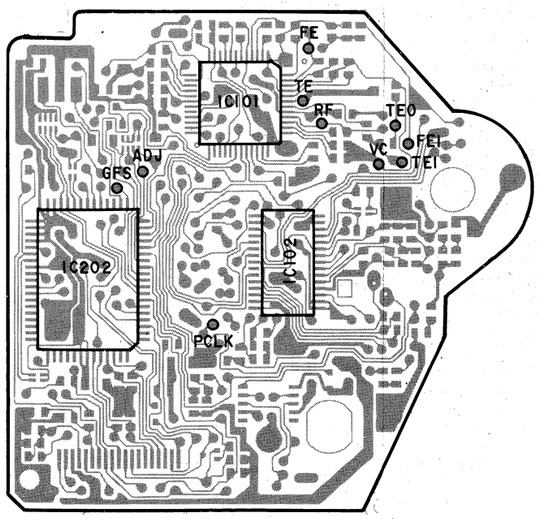
2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.
Therefore, do no perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Location:

[BD BOARD] – Conductor side –



Adjustment Location:

[MAIN BOARD] – Conductor side –

TUNER FM TUNED INDICATION LIGHT LEVEL ADJ
RV51

DECK A PLAYBACK LEVEL ADJ
RV321 (L-CH)
RV421 (R-CH)

DECK B PLAYBACK LEVEL ADJ
RV331 (L-CH)
RV431 (R-CH)

DECK B RECORD BIAS ADJ
RV351 (L-CH)
RV451 (R-CH)

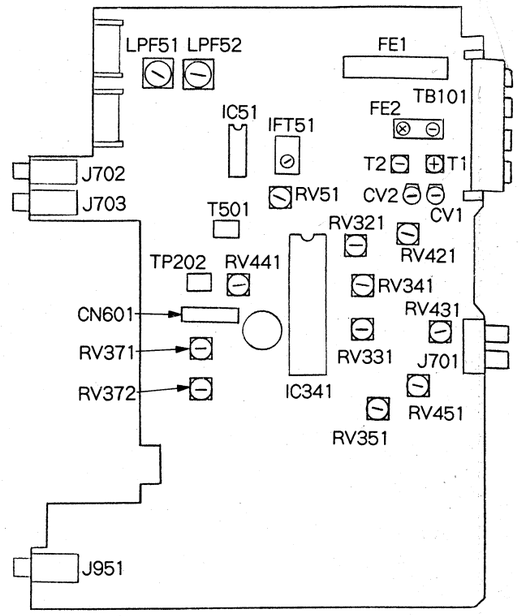
DECK B RECORD LEVEL ADJ
RV341 (L-CH)
RV441 (R-CH)

DECK A TAPE SPEED ADJ
RV371 (HIGH)
RV372 (NORMAL)

TUNER OUT
L-CH
R-CH

SW OSC VOLTAGE ADJ
CV1
CV2
T1

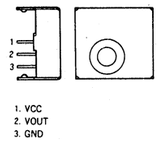
T2



SECTION 6
DIAGRAMS

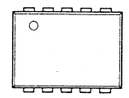
6-1. SEMICONDUCTOR LEAD LAYOUTS

GP1U59XB

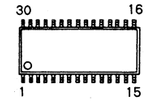


1. VCC
2. VOUT
3. GND

LA5601

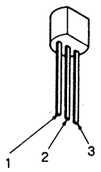


LA-6525M



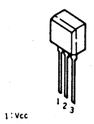
TOP VIEW

PST572D



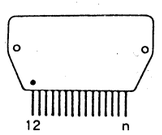
1 Ground
2 Input
3 Output

PST572K



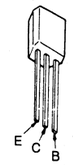
1: Vcc
2: GND
3: Out put

STK-4132MK2

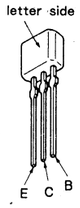


Making side view

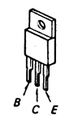
DTA114ES
DTA144ES
DTC114ES
DTC143TS
2SC2724-CD
2SC3622A-LK



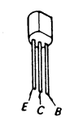
DTC144ES
2SA1175-HFE
2SC2785-HFE



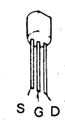
2SA473
2SD2012



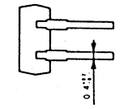
2SB1013-4
2SC3112-B
2SC945-P
2SD1387



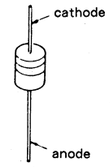
2SK246-GR3
2SK246-Y



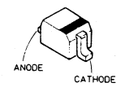
GP2S09-A



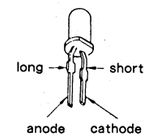
HZS27-2L
HZS6A1L
HZS6B1L
HZS7B3L
UZL-6L3
UZP-6.2BC
11ES2



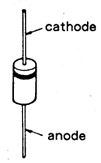
MA8039
1SS352



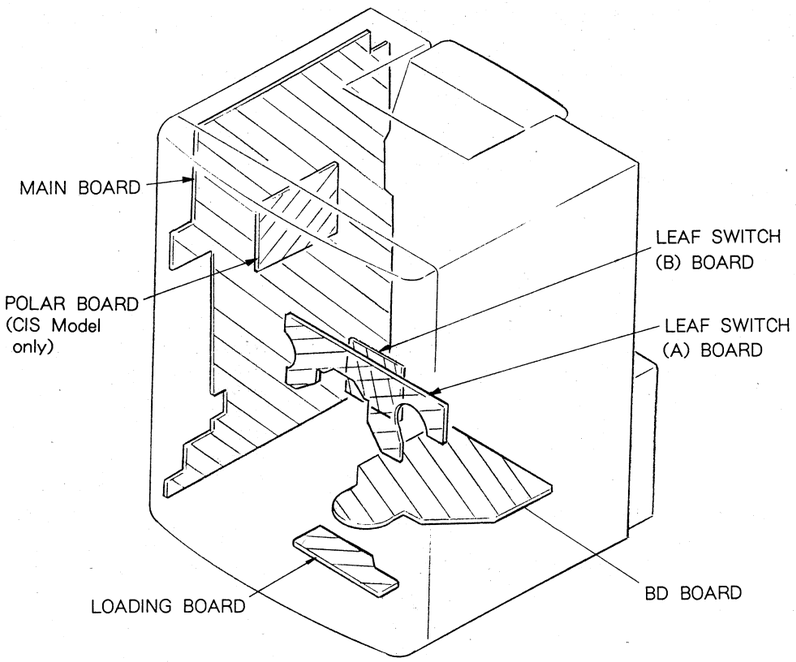
SEL2210S-CD
SEL6214S-LC05
SEL6414E-LC05

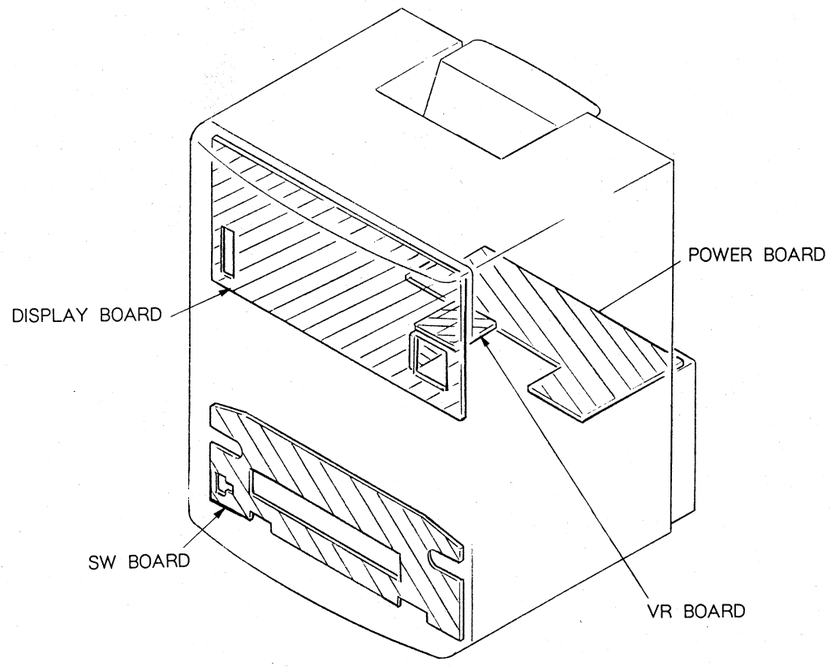


1N4148M



6-2. CIRCUIT BOARDS LOCATION





• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D21 (*3)	E-11	Q2 (*5)	E-13
D21 (*4)	E-14	Q3 (*3)	E-9
D51 (*3)	F-10	Q3 (*4)	E-13
D51 (*4)	F-14	Q4 (*3)	D-10
D52 (*4)	E-14	Q5 (*3)	D-9
D52 (*8)	E-10	Q6 (*3)	C-10
D53 (*8)	G-10	Q7 (*3)	C-10
D101	C-23	Q8 (*3)	C-10
D201BD	D-23	Q9 (*3)	B-9
D201	F-5	Q21 (*3)	D-11
D202	D-2	Q21 (*4)	D-15
D203	E-2	Q22 (*3)	C-11
D204	D-4	Q22 (*4)	C-15
D205	F-4	Q23 (*3)	D-12
D351	D-4	Q24 (*3)	C-12
D981	C-3	Q51	H-11
D1701 (*8)	H-15	Q52	G-11
D1702 (*8)	I-16	Q101	D-20
D1703 (*8)	J-15	Q201BD	D-23
D1704 (*8)	I-17	Q201	F-5
D1705 (*8)	J-15	Q202	F-5
		Q203	G-3
IC21 (*3)	E-11	Q204	G-3
IC21 (*4)	E-14	Q205	G-3
IC51	G-9	Q208	F-3
IC101	C-20	Q209	E-3
IC102	C-21	Q210	E-2
IC103	C-23	Q341	G-7
IC201	C-27BD	Q361	C-4
IC201BD	F-3	Q362	C-4
IC202	E-22	Q363	B-4
IC202	E-3	Q364	C-5
IC203	E-27	Q365	D-4
IC301	D-26	Q371	F-6
IC302	E-26	Q372	G-6
IC321	D-8	Q373	G-5
IC331	D-6	Q374	G-5
IC341	E-7	Q375	G-5
IC371	F-6	Q376	G-5
IC701 (*7)	C-8	Q441	G-7
IC702 (*6)	I-8	Q981	C-3
IC703	G-8	Q1001	G-24
IC981	I-3	Q1002	G-19
IC1701 (*8)	H-16	Q1701 (*8)	H-16
IC1702 (*8)	H-17	Q1702 (*8)	H-15
IC1703 (*8)	I-16	Q1703 (*8)	J-16
		Q1704 (*8)	J-15
Q1 (*3)	D-10	Q1705 (*8)	J-16
Q1 (*4)	D-13		

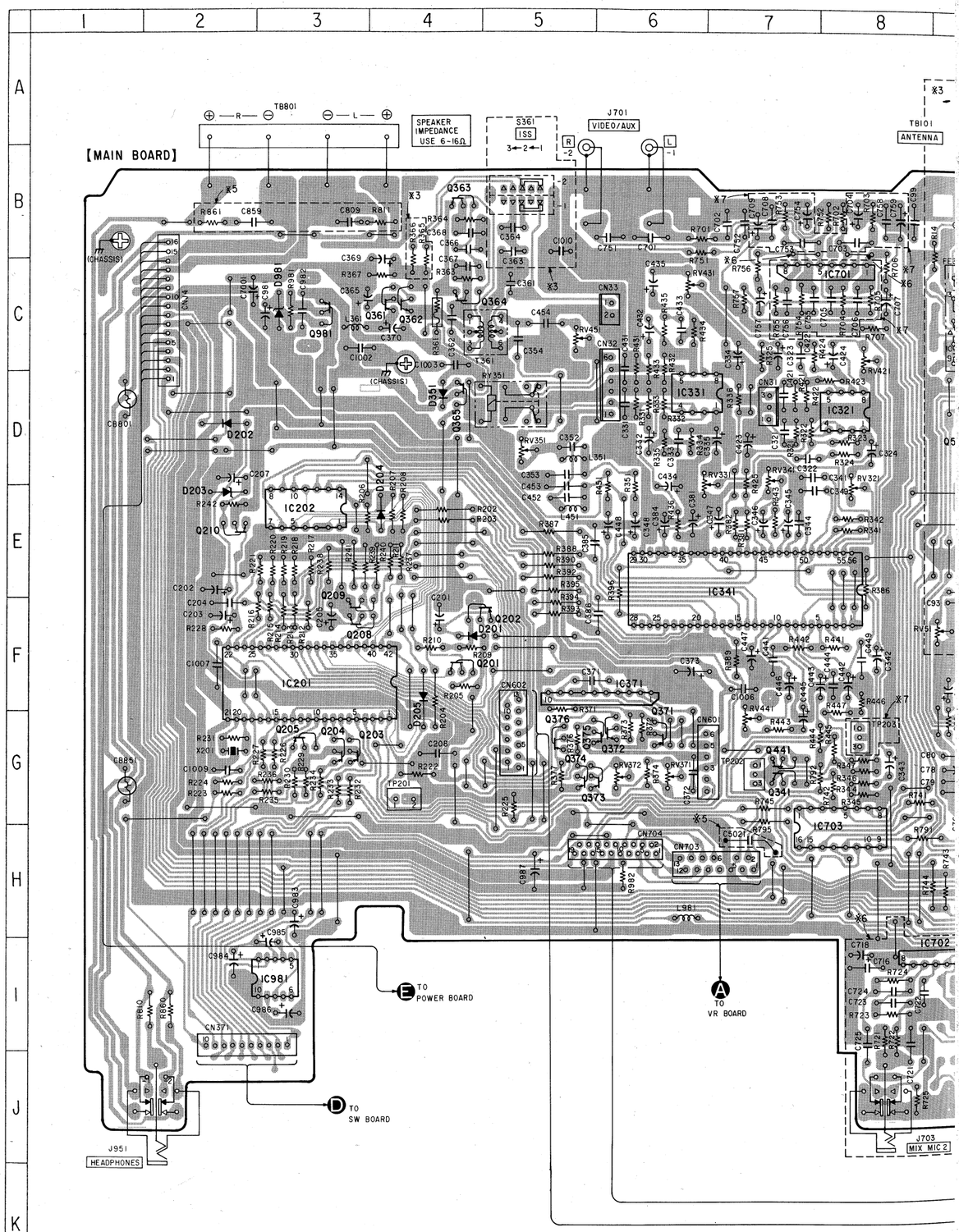
※1 : H51:AEP, EE, G, IT/H51M
※2 : H51:AEP, EE, CIS/H51M
※3 : H51:AEP, EE, CIS/H51M:AEP, UK
※4 : H51:G, IT/H51M:US, CND
※5 : H51:G, IT
※6 : H51M:US, CND
※7 : H51/H51M:AEP, UK
※8 : H51:CIS
※9 : H51:AEP, EE/H51M:AEP, UK
※10 : H51:AEP/H51M:AEP, UK
※11 : H51:EE, G, IT, CIS/H51M:US, CND

NOTE:
CND : Canadian model
AEP : AEP, AED model
IT : Italian model
G : German model
EE : East European model

Note on Mounting Diagram :

• ○—— : Parts extracted from the component side.
• ○ : Through hole.
• ▒▒▒ : Pattern on the side which is seen.
(Other pattern is not shown.)

6-3. PRINTED WIRING BOARDS — MAIN SECTION — • See page 15 for Semiconductor Lead Layouts.



— • See page 15 for Semiconductor Lead Layouts.

4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

SPEAKER IMPEDANCE USE 6~16Ω

S361 ISS 3⇔2⇔1

J701 VIDEO/AUX

TB101 ANTENNA AM FM75Ω COAXIAL

※3 ※4

【BD BOARD】 —CONDUCTOR SIDE—

M102 SPINDLE MOTOR

SW101 (LIMIT)

IC101 IC102 IC202

HE901 ERASE HEAD

HRP901 RECORD/PLAYBACK HEAD

HP901 PLAYBACK HEAD

DECK B

DECK A

CN33 CN32 CN31

【POLAR BOARD】 (H51 : CIS MODEL ONLY)

※8

【LEAF SWITCH (A) BOARD】

S1005 S1003 REC S1004 B 70/120 S1006 B STOP

CN1001 B HALF

Q1002 B SHUT

CN601

M901 CAPSTAN MOTOR

RED WHT BLU YEL +B

TO POWER BOARD

A TO VR BOARD

C TO DISPLAY BOARD

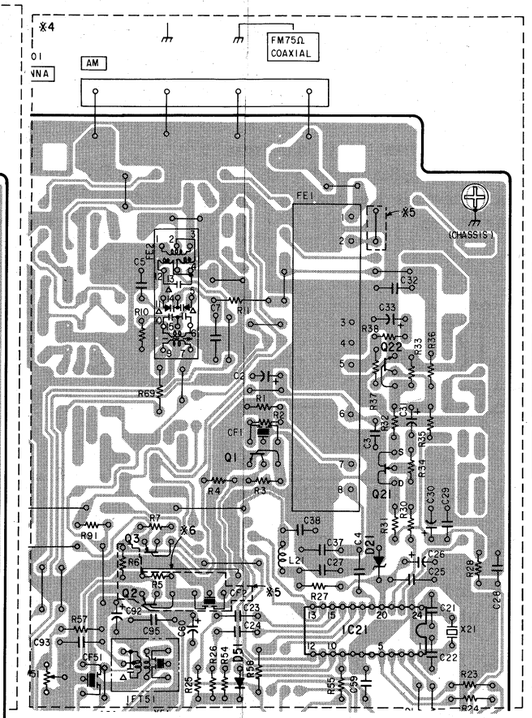
B TO DISPLAY BOARD

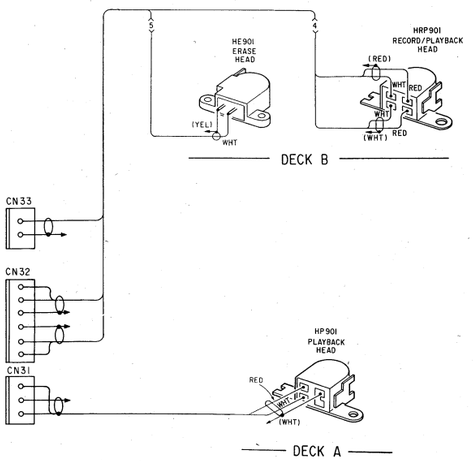
J703 MIX MIC 2

I-647-264

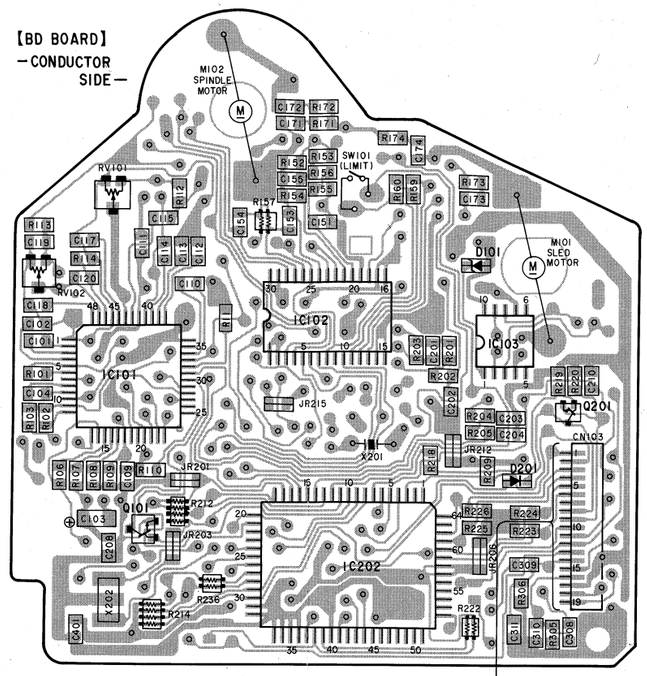
I-643-012-

12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29

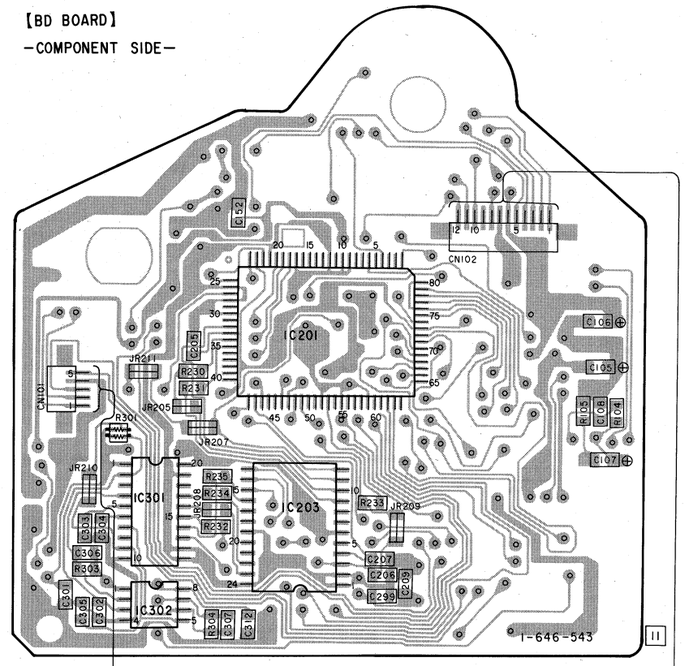




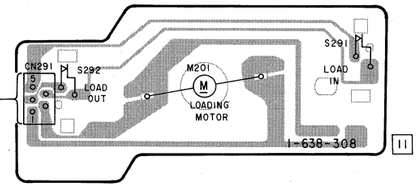
【BD BOARD】
—CONDUCTOR SIDE—



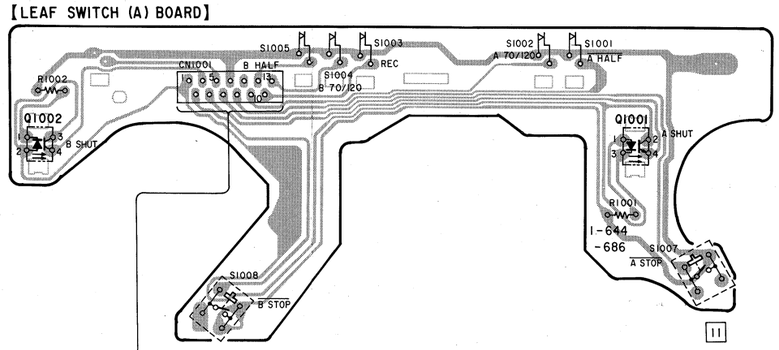
【BD BOARD】
—COMPONENT SIDE—



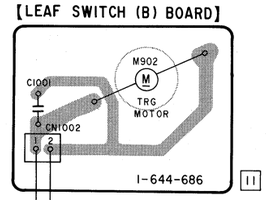
【LOADING BOARD】



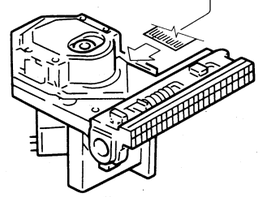
【LEAF SWITCH (A) BOARD】



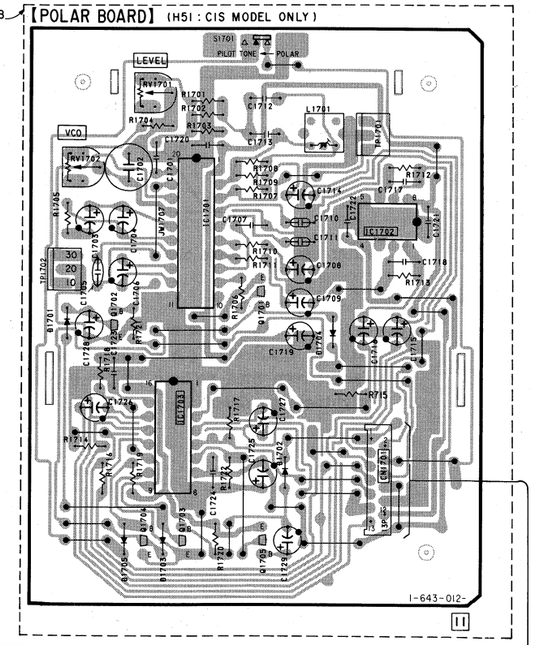
【LEAF SWITCH (B) BOARD】



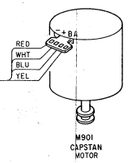
OPTICAL PICK-UP BLOCK (KSS-240A)



*8 【POLAR BOARD】 (H51 : CIS MODEL ONLY)



CN601



• **Wave forms**

1 — 5.6Vp-p, 0.25µsec — IC201 ⑳

2 — 5.4Vp-p, 0.24µsec — IC501 ㉟

3 — 5Vp-p, 31µsec — IC501 ㉜

4 — 5Vp-p, 4MHz — IC202 ⑧

5 — 3.3Vp-p, 16MHz — IC203 ③

6 — 1.2Vp-p — IC101 ㊵play (RFO)

Note on Schematic Diagram :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ▭: fusible resistor.

Note:	**Note:**
The components identified by matk ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number sppecified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifie.

- ▬▬: B + Line.
- ▬ ▬ ▬: B − Line.
- ▭: adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD STOP
- Voltages are taken with a VOM (input impedance 10 MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

OPTICAL PICK-UP BLOCK (KSS-240A) ⚠

DETECTOR RF AMP

VCC LBON G FP VREF RF- RFO FBO PA- PA+ FZC FE

LB PB AO BO CO DO EO FO F- VR VC TE

LD DRIVER

FOCUS COIL

TRAKKING COIL

B-KSS-240A

F- T+ T- F+ LBON VCC G RFO FZC FE TE VC CN102 12p

IC102
PWM MOTOR DRIVER
IC102 LA6525M

RV101 TRCKING GAIN ADJ.

RV102 FOCUS GAIN ADJ.

SW101 LIMIT SW

M101 SLED MOTOR

M102 SPINDLE MOTOR

IC101
IC101 CXA1372Q
EFM COMPARAT
FOCUS/TRACKING SERVO

【LOADING BOARD】

【BD BOARD】

LOAD IN
LOAD OUT
S291
S292
M201 LOADING MOTOR
CN291
CN101 5p

R222 18k
R214 22k x4
R236 1.2k
R212 22k x4

IC202

IC202
#PB75116GF
SYSTEM CONTROL

SCOR SQCLK SUBQ D/F16BT TIMER(NOT-PLAY) SENS
NC VDD DPDAT3 DPDAT2 DPDAT1 DPDAT0
BSIN KEYREC OUT SW IN SW VSS LOB IN LOB OUT FOK GFS
DPCLK LATCH SHIFT ATT RESET X2 X1 DFCT SW AMUTE BSOUT AFABJ LOBN XLK CLK DATA MODE ABJ

R223 22k
R224 22k
R225 22k
R226 22k
J206 0
C210 0.1
R209 22k
X202 4.0M
C209 1
J201 0

D201 1SS355
R218 4.7k
Q201 2SC4154
R219 10k
R220 10k
R221 10k

Q101 2SC3395 DEFECT SWITCH

IC101

IC101
CXA1372Q
EFM COMPARATOR
FOCUS/TRACKING/SLED
SERVO

VCC CC2 CC1 FOK EFM ASY DFCT MIRR DGND SENS C.OUT XRST
CB CP RFI RFO DVEE TZC TE TDFCT ATSC FZC FE FDFCT
DATA XLT CLK LOCK DIRC AVEE SSTOP ISET FSET SL- SLO SL+
VC FOB FSJ FLB FEO FE- SBCH TOU TG2 AVCC TA0 TA- SLED

C111 1
C110 0.033
R111 1k
R110 1k
C109 0.1
R109 3.3k
R108 220k
R107 510k
R106 3.3k
C101 0.1
C102 0.033
R101 100k
C104 0.1
R102 100k
R105 6.8k
C108 0.1
C107 47
R103 56k
R104 120k
C105 47
C103 4.7
C106 47

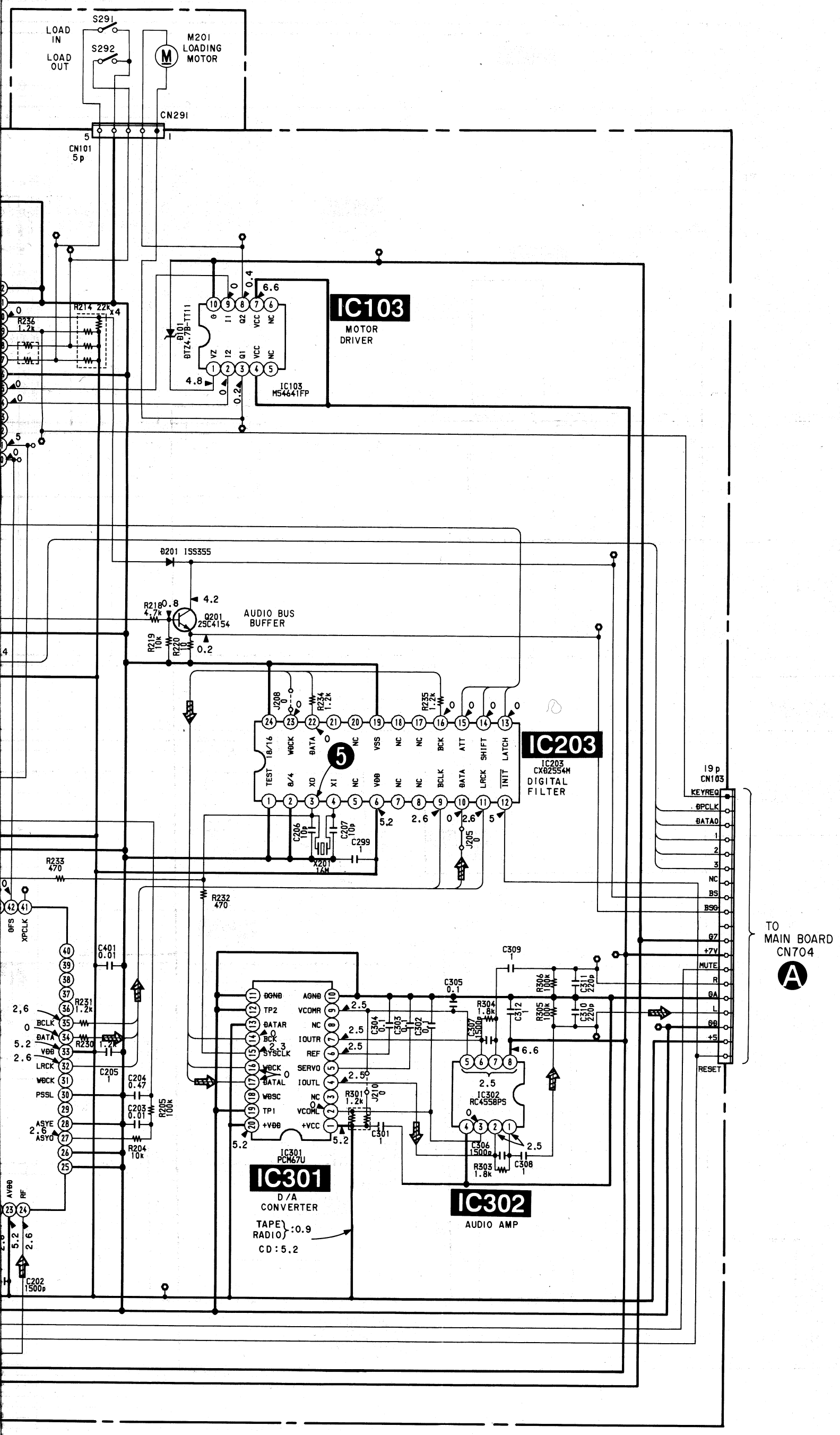
IC201

IC201
CXD2500AQ
CD DIGITAL
SIGNAL PROCESSOR
CLV SERVO

SBSO SCOR WFCK DOUT MD2 XTSL XTAO XTAI VSS MNT0 MNT1 MNT2 MNT3 RFCK GFS XPCLK
EXCK SQSO SQCK MUTE SENS XRST DATA XLAT VDD CLOK SEIN CNIN DATO XLTO CLKO MIRR
FOK MDP LOCK TEST VSS FILO FILI PCO AVSS CLTV AVDD RF
BCLK DATA VDD LRCK WDCK PSSL ASYE ASYO

J215 0
R233 470
R232 470
C401 0.01
R231 1.2k
R230 1.2k
C205 1
C204 0.47
C203 0.01
R205 100k
R204 10k
C208 1
C201 0.047
R201 3.3k
R203 3.3k
R202 10k
C202 1500p
J203 0

16 17 18 19 20 21 22 23 24 25 26 27



16 17 18 19 20 21 22 23 24 25 26 27

LOAD IN
LOAD OUT
S291
S292
M201 LOADING MOTOR
CN291
CN101 5p

IC103
MOTOR DRIVER
IC103 M54641FP
D101 BTZ4.7B-TT11
R214 22k x4
R236 1.2k

D201 1SS355
R218 4.7k
Q201 2SC4154
AUDIO BUS BUFFER
R219 10k
R220 10
R234 1.2k
R235 1.2k
J208 0

IC203
IC203 CX02554M
DIGITAL FILTER
TEST 18/16 WDCK DATA NC VSS NC NC BCK ATT SHIFT LATCH
B/4 XO XI NC VDD NC NC BCLK DATA LRCK INIT

C206 10p
C207 10p
C299 1
X201 16M
J205 0
R233 470
R232 470

19p CN103
KEYREQ
DPCLK
DATA0
1
2
3
NC
BS
BSG
GZ
+7V
MUTE
R
GA
L
GB
+5
RESET
TO MAIN BOARD CN704
A

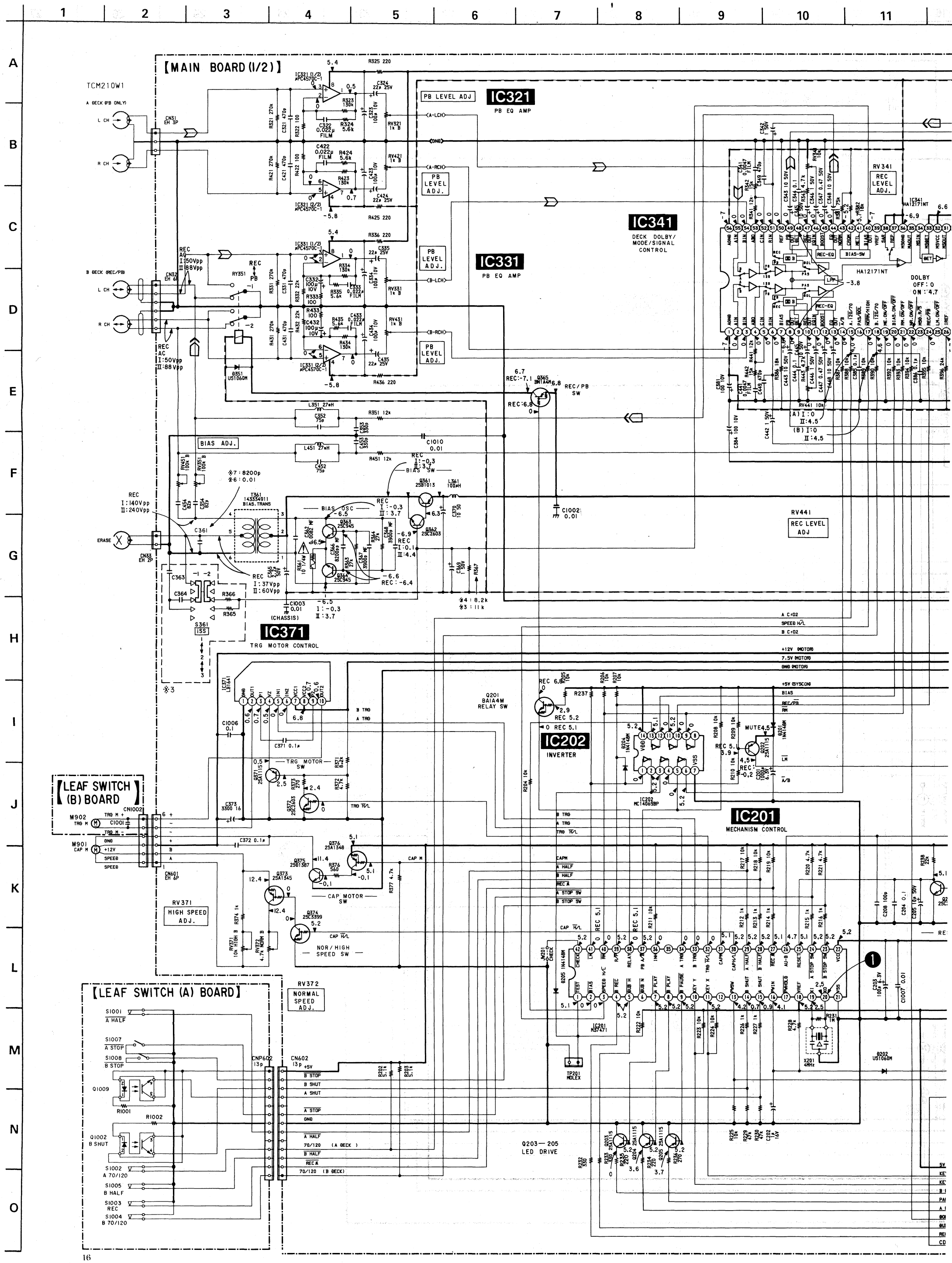
C401 0.01
R231 1.2k
R230 1.2k
C205 1
C204 0.47
C203 0.01
R205 100k
R204 10k
C202 1500p

C309 1
C305 0.1
R306 100k
C311 220p
R304 1.8k
C312
R305 100k
C310 220p
C307 1500p
C304 0.1
C303 0.1
C302 0.1
R301 1.2k
J210 0
C301 1

IC301 PCM67U
IC301
D/A CONVERTER
TAPE/RADIO :0.9
CD :5.2

IC302 RC4558PS
C306 1500p
R303 1.8k
C308 1
IC302
AUDIO AMP

6-5. SCHEMATIC DIAGRAM — MAIN SECTION — • See page 21 for Wave forms. • See page 41 for IC Block Diagrams.



RV341 REC LEVEL ADJ.

IC361 HA12171NT

HA12171NT

BIAS-SW

DOLBY OFF : 0 ON : 4.7

R344 4.7k

※10 : 4.7k
※11 : 22k

R347 47k

R346

PB MUTE

TP202 MOLEX 3p

(PB OUT)

R345 10k

R445 10k

Q341 BA1L3Z

Q441 BA1L3Z

REC:-0.2

4.5

(PB-L)
(GND)
(PB-R)

R444 4.7k

R446

R447 47k

TP203

※7

R792

※5,9 : 1k
※6,8 : 10k

R742

IC703
FUNCTION SELECTOR

IC703 MC14052BP

R744 1k

R794 1k

R741 4.7k

R791 4.7k

R743 47k

R795 47k

(-7.5V)
(REC-L)
(REC-R)

※7

IC701
EQ AMP

IC701 M5218AL

TO TUNER GND

C99 0.01

※6

C703 100p

C753 100p

R705 47k

R706 4.7k

C707 50

R756 4.7k

C757 50

C706 0.0018 MF

C754 0.0018 MF

R755 47k

J701

VIDEO/AUX

L 1
R 2

C701 100p

R701 1k

C702 100p

R702 47k

R751 1k

C751 100p

C752 100p

R752 47k

R704 560k

C705 0.0056 MF

R703 1k

R753 1k

C755 0.0056 MF

R754 560k

C704 10 50

C758 0.01

C759 10 50

C754 10 50

C708 0.01

C760 10 50

R707 47k

R757 47k

※6

(MIC1)

IC702
MIC AMP

IC702 M5218AL

J703

C725 0.1

C724 47p

C723 100p

(+7.5V)

(-7.5V)

C721 100p

R721 10k

R722 330

C722 100p

R725 100k

R723 3.3k

C717 0.01

C716 0.01

C718 10 50

C719 10 50

J703
MIX MIC 2

R795

R745

※10 : 100
※11 : 10k

C7001 100 25V

L981 100uH

7.5V 2SB

6.8

7.4

C982 0.01

C983 330 6.3V

J951

R810 560 1/2

R860 560 1/2

CB801

CB851

(HPGND)
(LCH)
(RCH)

HEADPHONES

SPEAKER

L+
GND
R+

TB801

※5

R811 4.7

C809 0.1

R861 4.7

C859 0.1

IC981
RESET

(LGND)
(RGND)

(+7.5V)

(CD-OFF)
(PWSW)
(AU-B)
(PWIN)
(DGND)
(MOTGND)

C208 100p

C204 0.1

C205 10 50V

R238 22k

R239 10k

R240 8.2k

Q208 2SC2603

Q209 2SC2603

R241 1.6k

RESET

REG. Q210 2SB773

R242 220

C1009 0.1

D203 UZ5.6B1

C707 47 25V

C203 100 6.3V

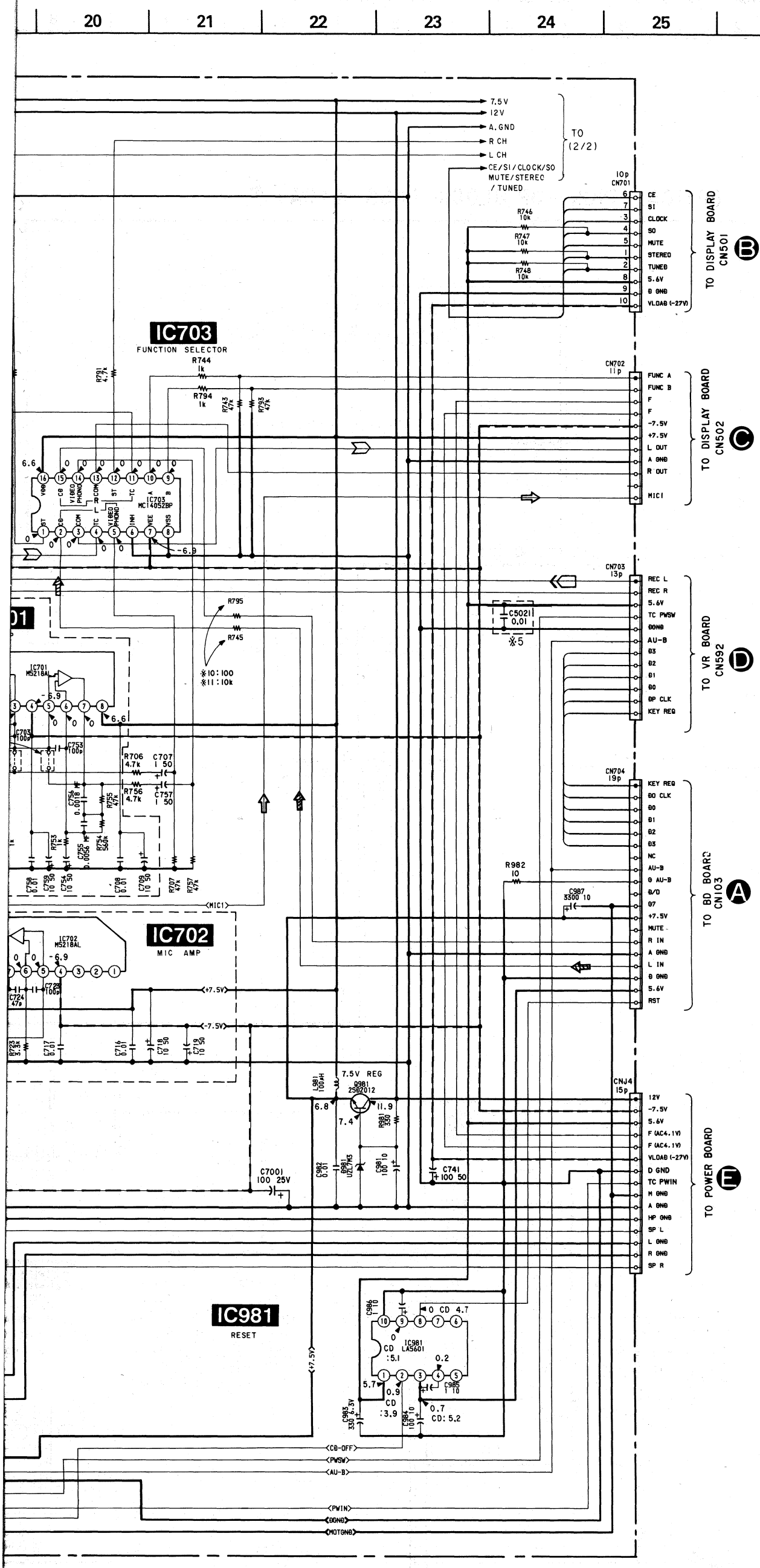
C1007 0.01

D202 US1060M

CN371

5V
KEY X
KEY Y
B PLAY
PAUSE
A PLAY
DOLBY
SUB H
REC
CD OFF

TO SW BOARD CN381 (F)



※1 : H51:AEP, EE, G, IT/H51M
※2 : H51:AEP, EE, CIS/H51M
※3 : H51:AEP, EE, CIS/H51M:AEP, UK
※4 : H51:G, IT/H51M:US, CND
※5 : H51:G, IT
※6 : H51M:US, CND
※7 : H51/H51M:AEP, UK
※8 : H51:CIS
※9 : H51:AEP, EE/H51M:AEP, UK
※10 : H51:AEP/H51M:AEP, UK
※11 : H51:EE, G, IT, CIS/H51M:US, CND

NOTE:
CND : Canadian model
AEP : AEP, AED model
IT : Italian model
G : German model
EE : East European model

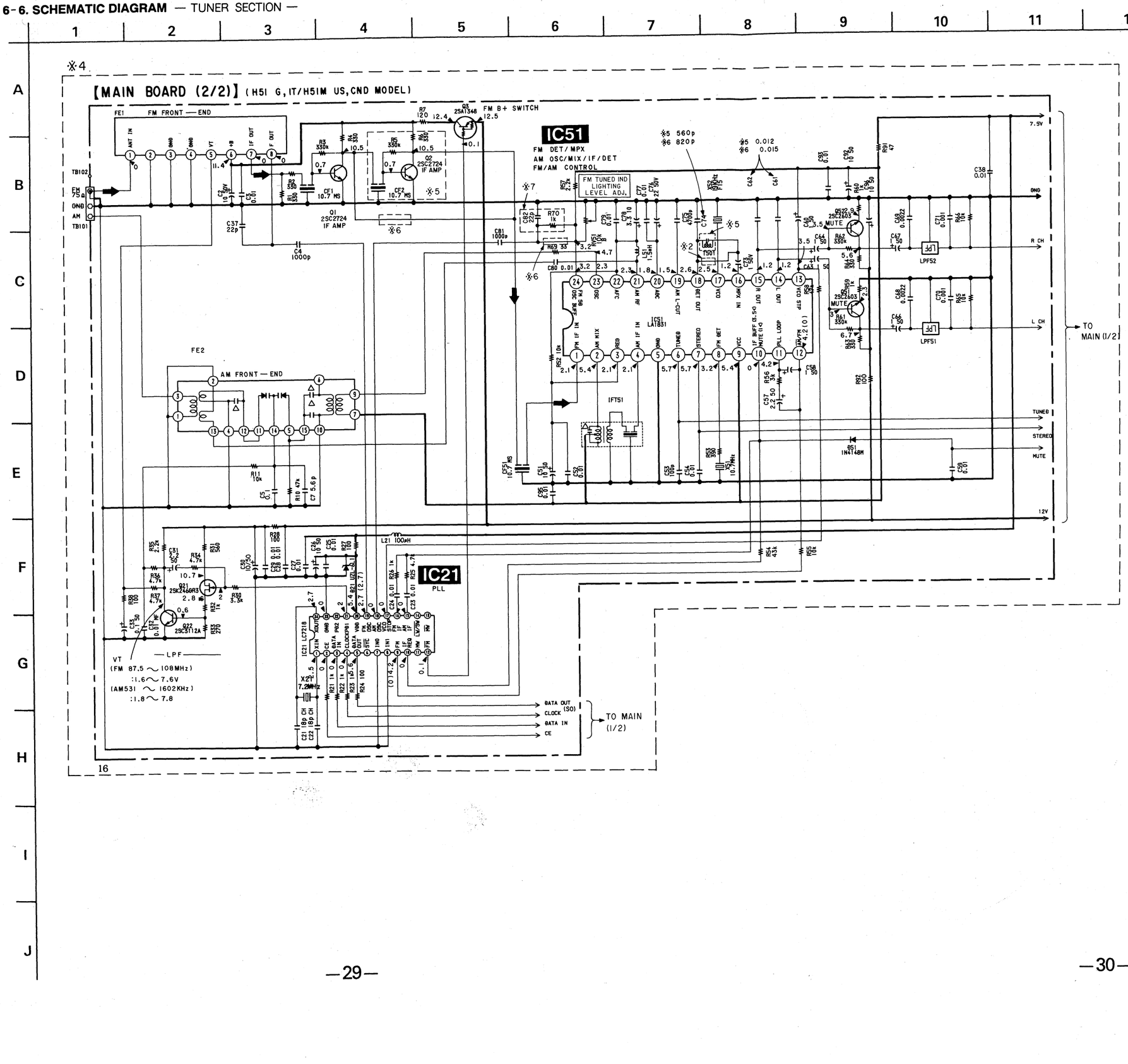
Note on Schematic Diagram :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ⏦ : fusible resistor.

Note: The components identified by matk ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number sppecified.	**Note:** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifie.

- ▬▬ : B + Line.
- ▬ ▬ ▬ : B − Line.
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
  ( ) : AM/MW
  〈 〉 : LW
- Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ :MIC ⇒ : PB ⇛ : CD
  ➡ : FM ⇨» : REC

6-6. SCHEMATIC DIAGRAM — TUNER SECTION —



15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30

(H51 AEP, EE, CIS / H51M AEP, UK MODEL)

FM B+ SWITCH

IC51
FM: DET/MPX
AM: OSC/MIX/IF/DET
FM/AM CONTROL

※8 : 3.3/10
※9 : 3.3/50
FM TUNED IND
LIGHTING
LEVEL ADJ.
※8 : 22/500
※9 : 22/50

BAND SWITCH (LW)

BAND SWITCH (MW)

MW FRONT — END

IFT51

IC21
PLL

IC21 LC7218

X2
7.2MHz

L21 100μH

7.5V
GND
R CH
L CH
TUNED
STEREO
MUTE
12V
-7V

TO MAIN (I/2)

DATA OUT (SO)
CLOCK
DATA IN (SI)
CE

TO MAIN. (I/2)

TO POLAR BOARD CN1701

※8

【POLAR BOARD】(H51: CIS MODEL ONLY)

IC701
MPX

TP1701 FILTER

IC702
AMP

IC1702 M5218AP

IC703
IC1703 MC14053BCP
POLAR/PILOT SWITCH

SUBCARRIER

TP1702 VCO

VCO FREQUENCY

Q1701 BN1A4M VCO STOP

Q1702 BA1A4M SWITCH

Q1703 BA1A4M SWITCH

Q1704 BA1A4M SWITCH

Q1705 BN1A4M SWITCH

S1701 PILOT TONE

POLAR

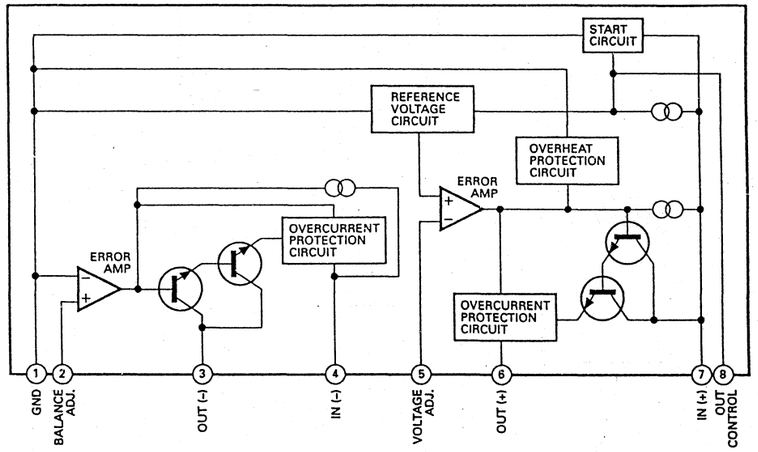
CN1701
- MUTING IN
- VCO STOP IN
- COMPOSITE IN
- FM1/OTHER IN
- VCO STOP OUT
- STEREO OUT
- LCH IN
- -7V
- RCH IN
- GND
- RCH OUT
- +7V
- LCH OUT

TO MAIN BOARD CN51

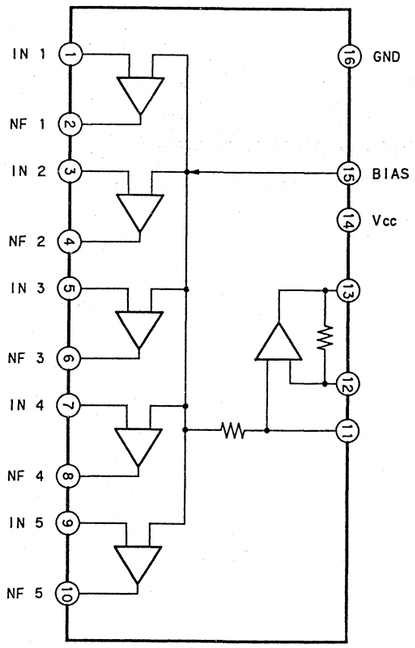
G

• IC Block Diagrams

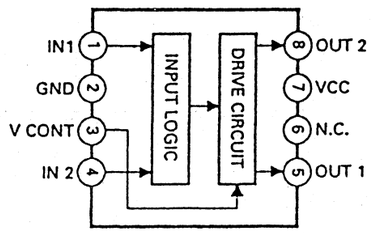
• IC901 M5230L-A



• IC601, 651 M5226FP



• IC591 LB1639



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D381	F-9	IC501	B-8
D382	F-8	IC502	B-10
D383	G-7	IC503	A-9
D384	G-6	IC504	B-10
D385	F-3	IC571	H-2
D501	E-6	IC591	C-2
D505	E-7	IC601	D-6
D506	A-11	IC621	B-5
D507	B-10	IC651	D-8
D508	B-7	IC801	E-17
D509	A-11	IC901	E-15
D510	A-11		
D591	B-1	Q501	B-10
D592	B-2	Q502	B-7
D821	G-15	Q601	C-6
D901	D-15	Q602	E-7
D902	D-14	Q603	D-4
D903	C-14	Q604	E-5
D904	D-14	Q651	C-6
D905	D-14	Q652	E-7
D906	H-16	Q901	G-17
D907	D-14	Q902	D-17
D951	E-14	Q903	C-17
D952	D-14	Q904	E-15
D953	E-14		
D954	E-14		

Note on Mounting Diagram :

- ○—— : Parts extracted from the component side.
- ○ : Through hole.
- ▒▒ : Pattern on the side which is seen.

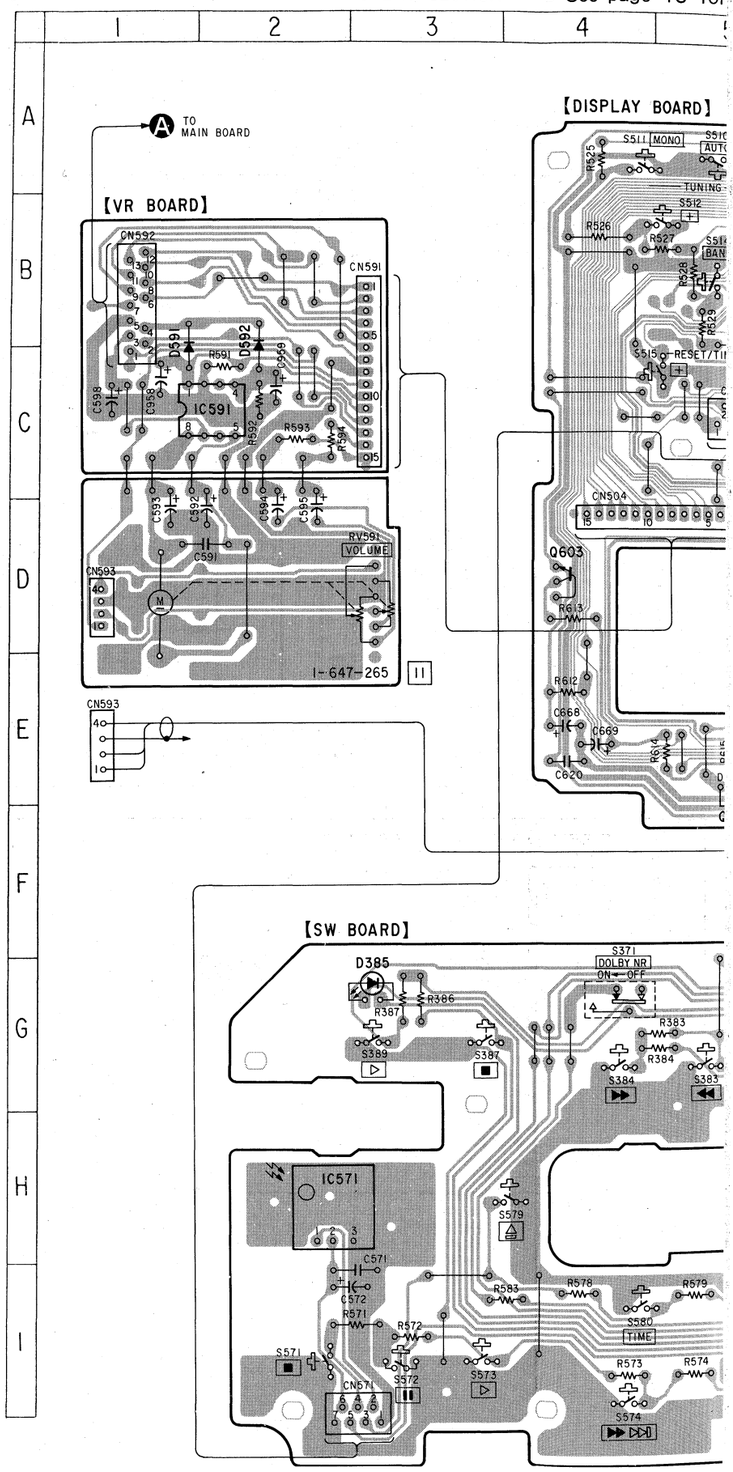
(Other pattern is not shown.)

※1 : H51:AEP, EE, G, IT/H51M
※2 : H51:AEP, EE, CIS/H51M
※3 : H51:AEP, EE, CIS/H51M:AEP, UK
※4 : H51:G, IT/H51M:US, CND
※5 : H51:G, IT
※6 : H51M:US, CND
※7 : H51/H51M:AEP, UK
※8 : H51:CIS
※9 : H51:AEP, EE/H51M:AEP, UK
※10 : H51:AEP/H51M:AEP, UK
※11 : H51:EE, G, IT, CIS/H51M:US, CND

NOTE:

CND : Canadian model
AEP : AEP, AED model
IT : Italian model
G : German model
EE : East European model

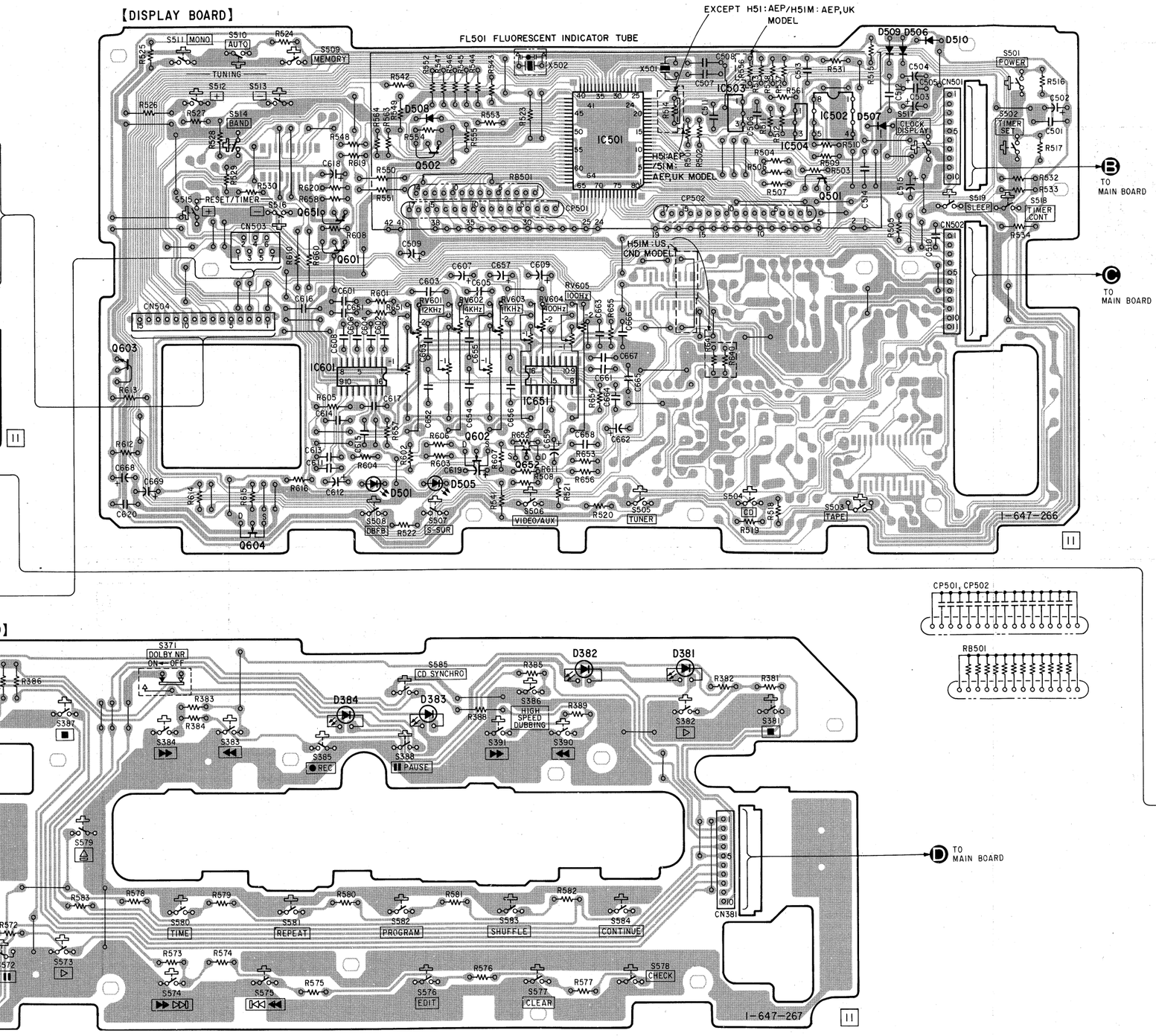
6-7. PRINTED WIRING BOARDS — DISPLAY SECTION — • See page 15 for



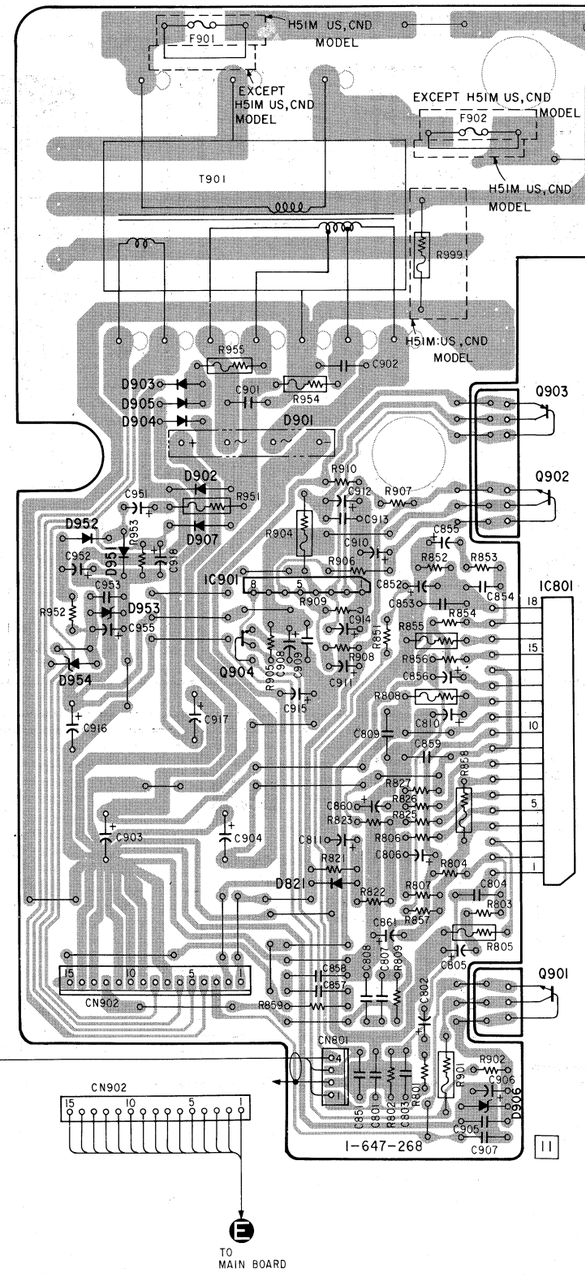
AY SECTION — • See page 15 for Semiconductor Lead Layouts.

3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

【DISPLAY BOARD】



【POWER BOARD】



※1 : H51:AEP, EE, G, IT/H51M
※2 : H51:AEP, EE, CIS/H51M
※3 : H51:AEP, EE, CIS/H51M:AEP, UK
※4 : H51:G, IT/H51M:US, CND
※5 : H51:G, IT
※6 : H51M:US, CND
※7 : H51/H51M:AEP, UK
※8 : H51:CIS
※9 : H51:AEP, EE/H51M:AEP, UK
※10 : H51:AEP/H51M:AEP, UK
※11 : H51:EE, G, IT, CIS/H51M:US, CND

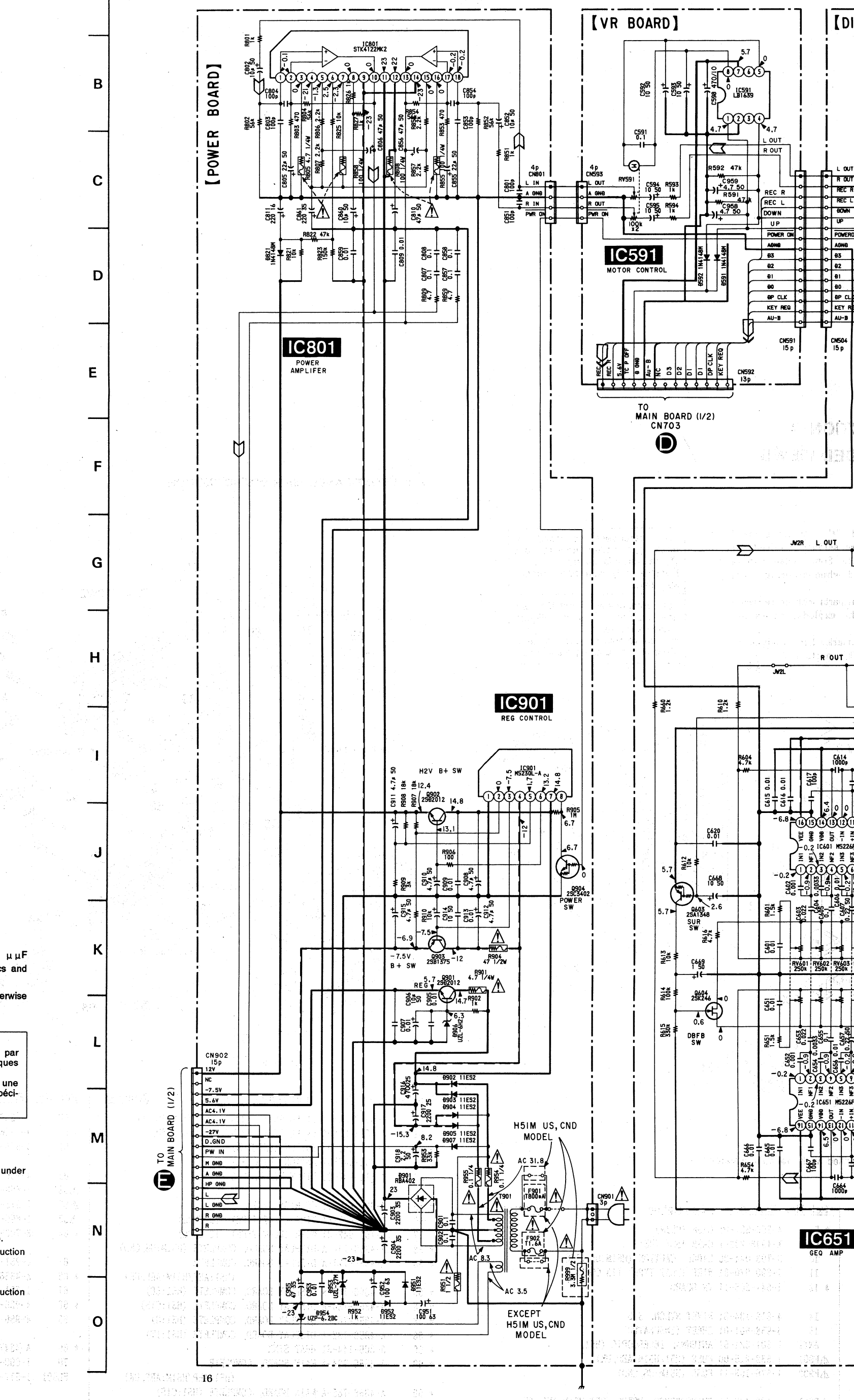
NOTE:
CND : Canadian model
AEP : AEP, AED model
IT : Italian model
G : German model
EE : East European model

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ⏦: fusible resistor.

Note:	Note:
The components identified by matk ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number sppecified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifie.

- ——— : B+ Line.
- - - - : B − Line.
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
  ( ) : AM/MW
  ‹ › : LW
- Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ :MIC ⇨ : PB ⇨ : CD
  ➡ : FM ⇨ :REC



【DISPLAY BOARD】

FL501

CP501 220p x15

CP502 220p x15

C509 33u/25V

C510 0.1u

R515 3.3k

R516 470 R517 680 R518 1k R519 1.5k R520 2.2k R521 4.7k R522 12k

S501 POWER S502 T.SET S503 TAPE S504 CD S505 TUNER S506 PHONO VIDEO S507 S-SUR S508 DBFB

R523 3.3k

R524 470 R525 680 R526 1k R527 1.5k R528 2.2k R529 4.7k R530 12k

S509 MEMORY S510 AUTO S511 MONO S512 T.UP S513 T.DWN S514 BAND S515 P.UP S516 P.DWN

R531 3.3k

R532 470 R533 680

S517 CLK DISP S518 T.CONT S519 SLEEP

D510 1N4148M

C513 0.01

H5I AEP/H5IM AEP,UK MODEL

EXCEPT H5I AEP/H5IM AEP, UK MODEL

H5I : G : 470
H5I : IT : 1.1k
H5I : EE : 5.6k
H5I : CIS : 10k
H5IM:US,CND: 3.6k

R541 330

R542 100

X502 4.19M

C508 12p CH C507 12p CH

X501 32K

R538 3.3k R537 3.3k R556 3.3k R514 R513 10

R552 100

AUB SW Q502 2SC2603 R554 10k R555 10k

D508 1N4148

R543 100 R544 100 R545 100 R546 100 R547 100 R548 100 R549 100 R550 100 R551 100

R563 10k R564 2.2k

IC501 DISPLAY/ FUNCTION CONTROL

IC501 μPD780429F-F15

RB501 47k x12

IC503 RESET

IC504 RESET

IC503 PST572K IC504 PST572D

R511 4.7k R561 4.7k

C506 0.01 C511 0.01 C512 0.01

R512 1k

D509 1N4148M

R509 10k R510 10k

D507 1N4148M

IC502 ROM

IC502 X24C01P

Q501 2SA1348

R508 330

D511 SEL2210S

C503 100 16 C514 0.01

C505 0.01 C504 100 16

D506 1N4148M

CN503 AVSS 5.6V CD OFF KEY 4 KEY 5 SIRCS

TO MAIN BOARD (1/2) CN571

L OUT R OUT REC R REC L SDWN UP POWERON AGND B3 B2 B1 B0 BP CLK KEY REQ AU-B

CN591 15p CN504 15p

JW2R L OUT

R OUT REC L REC R

IC601 GEQ AMP

IC601 M5226FP

C614 1000p C617 100p C615 100p C616 0.01 C611 0.1 C612 0.68 50 C608 0.1 MF C609 0.33 50 C607 0.22 50 C606 0.01 C605 0.1 C604 0.0033 C603 0.022 C602 0.001

R605 470 R611 10k R606 100 R607 100k R603 100k R602 100k

Q601 2SC3622 MUTE R608 2.2k R619 4.7k

Q602 2SK246 DBFB SW R656 100

C618 1-50

RV601 250k RV602 250k RV603 250k RV604 250k RV605 250k

C653 0.022 C655 0.1 C657 0.22 50 C659 0.33 50 C652 0.001 C654 0.0033 C656 0.01 C658 0.1 MF C662 0.68 50

IC651 M5226FP

C647 100p C643 100p C664 1000p

R652 100k R653 100k R657 330k R655 470

Q651 2SC3622 MUTE R658 2.2k R620 82k

C619 1-50

R641 22k R640 22k

JW1R JW1L

H5IM US,CND MODEL

IC651 GEQ AMP

16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25

【SW BOARD】

CN381
C0 OFF
REC
HSPB
DOLBY
BPLY
PAUSE
APLY
KEY Y
KEY X
5V

OFF ON
DOLBY S371

D384 SEL5220S
D382 SEL5220S
D381 SEL5520S
D383 SEL5920A
D385 SEL5520S

R386 1.5k R387 2.2k R388 10k R389 12k
S387 S388 S389 S390 S391
B STP PAUSE B PLAY A REW A FF

R381 1.5k R382 2.2k R383 3.9k R384 5.6k R385 12k
S381 S382 S383 S384 S385 S386
A STP A PLAY B REW B FF REC DUB H

R571 470 R572 680 R573 1k R574 1.5k R575 2.2k R576 4.7k R577 12k
S571 S572 S573 S574 S575 S576 S577 S578
STOP PAUSE PLAY FF AMS REW AMS EDIT CLEAR CHECK

R578 470 R579 680 R580 1k R581 1.5k R582 2.2k R583 4.7k
S579 S580 S581 S582 S583 S584 S585
OPN CLS TIME REPEAT PGM SHUFF CONT. C0 SYNC.

TO MAIN BOARD (1/2) CN371

CN503 AVSS 5.6V C0 OFF KEY 4 KEY 5 SIRCS
CN571 AVSS 5.6V C0 OFF KEY 4 KEY 5 SIRCS

IC571
REMOTE RECEIVER
IC571 GP1U59X
5.5 5.7
C572 0.56 C571 0.01

IC503
RESET
IC503 PST572K
5.2 5 5.7
R511 4.7k R512 1k R561 4.7k
C506 0.01 C511 0.01 C512 0.01

IC504
RESET
IC504 PST5720
5.5 5.7

D509 1N4148M

R509 10k R510 10k D507 1N4148M

IC502
ROM
DBFB SW
Q501 2SA1348 6.6
IC502 X24C01P
R508 330 D501 SEL2210S
C503 100 16 C514 0.01
C505 0.01 C504 100 16 D506 1N4148M

EXCEPT H51 AEP/H51M
AEP, UK MODEL
H51 : G : 470
H51 : IT : 1.1k
H51 : EE : 5.6k
H51 : CIS : 10k
H51M : US,CND : 3.6k

R513 10
R514 3.3k
R556 3.3k

C502 100 16 C501 0.01
C515 22 35

10p CN501
R501 100 STEREO
R502 100 TUNED
R503 100 CLOCK
R504 100 SI
R505 100 MUTE
R506 100 CE
R507 100 SO
5.6V
AGND
VLOAD
(-27V)

TO MAIN BOARD (1/2) CN701 B

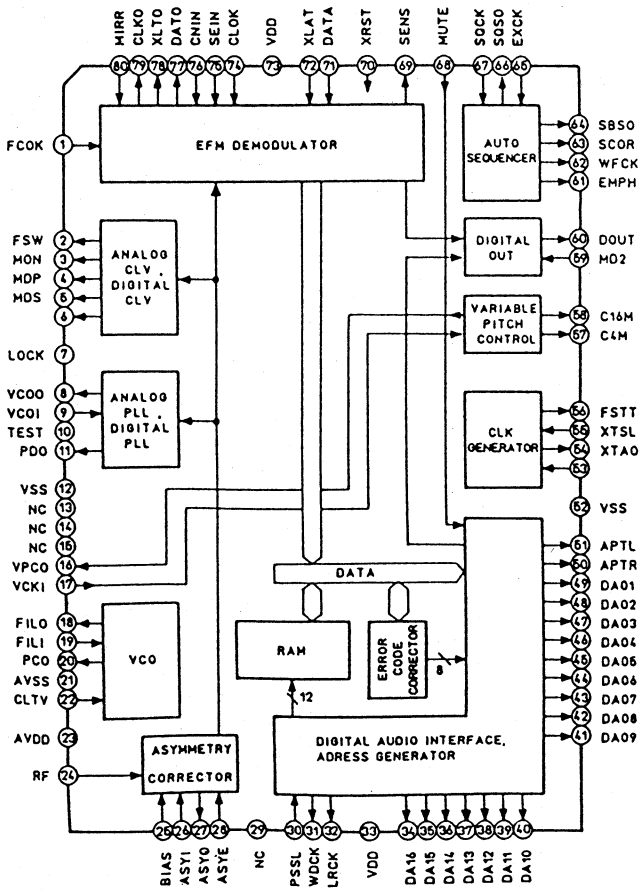
11p CN502
FUNC A
FUNC B
F
F
-7.5V
+7.5V
R
AGND
L

TO MAIN BOAR (1/2) CN702 C

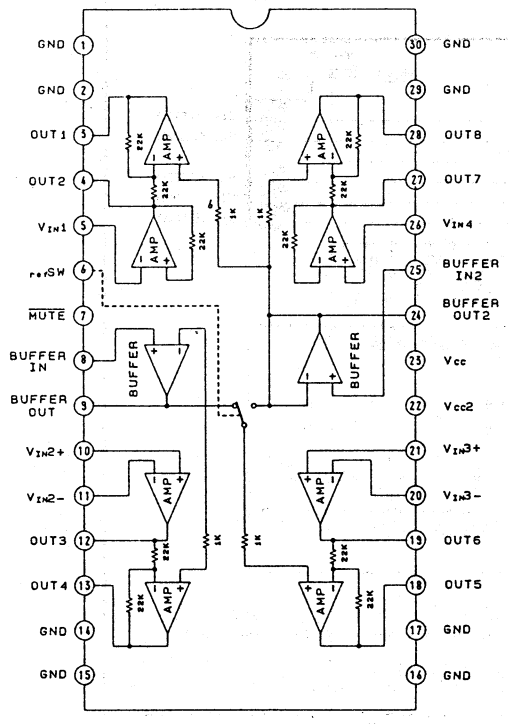
JW1R
JW1L
H51M US,CND MODEL
R541 22k R540 22k

- IC Block Diagrams

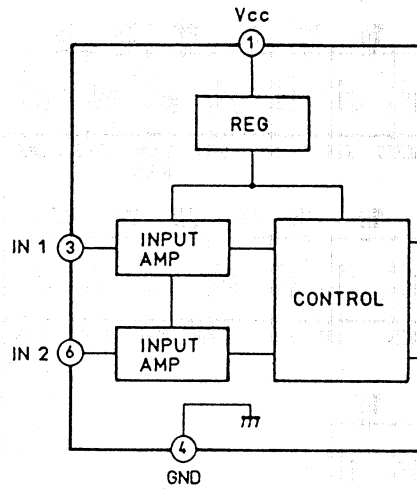
- IC201 CXD2500AQ (BD BOARD)



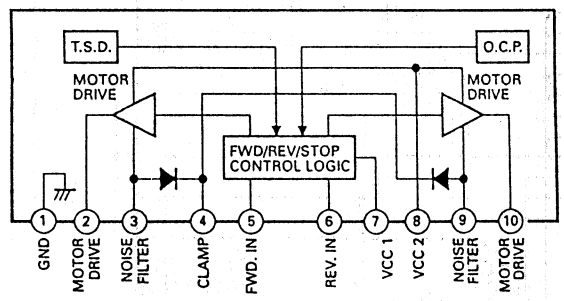
- IC102 LA6525M (BD BOARD)



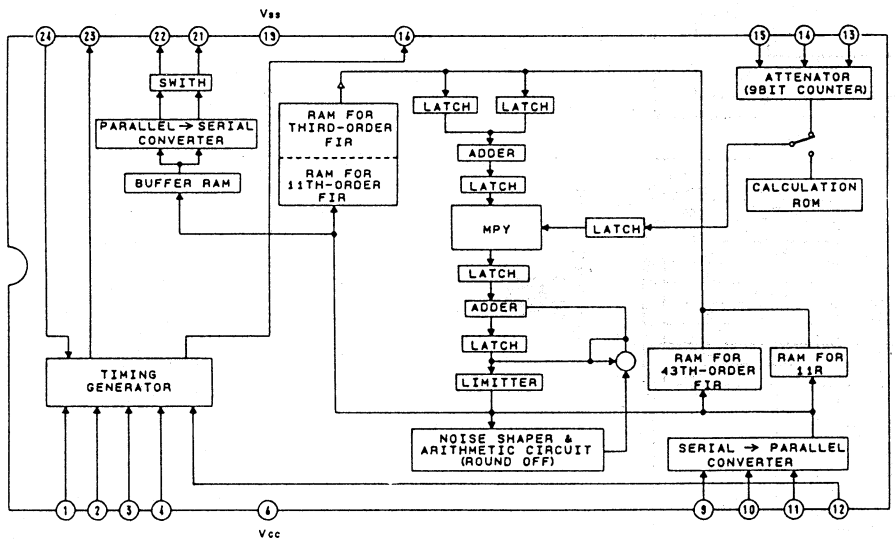
- IC103 M54641FP (BD BOARD)



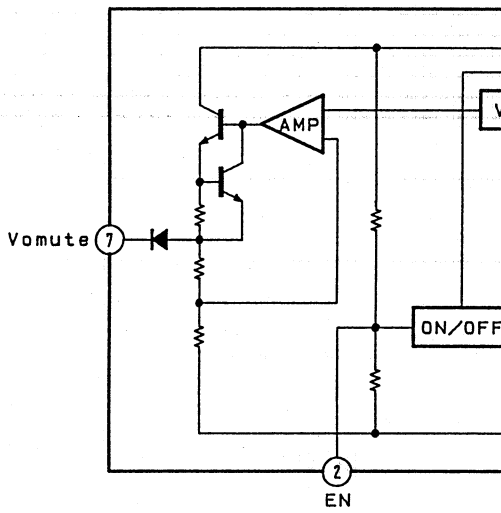
- IC371 LB1641 (MAIN BOARD)



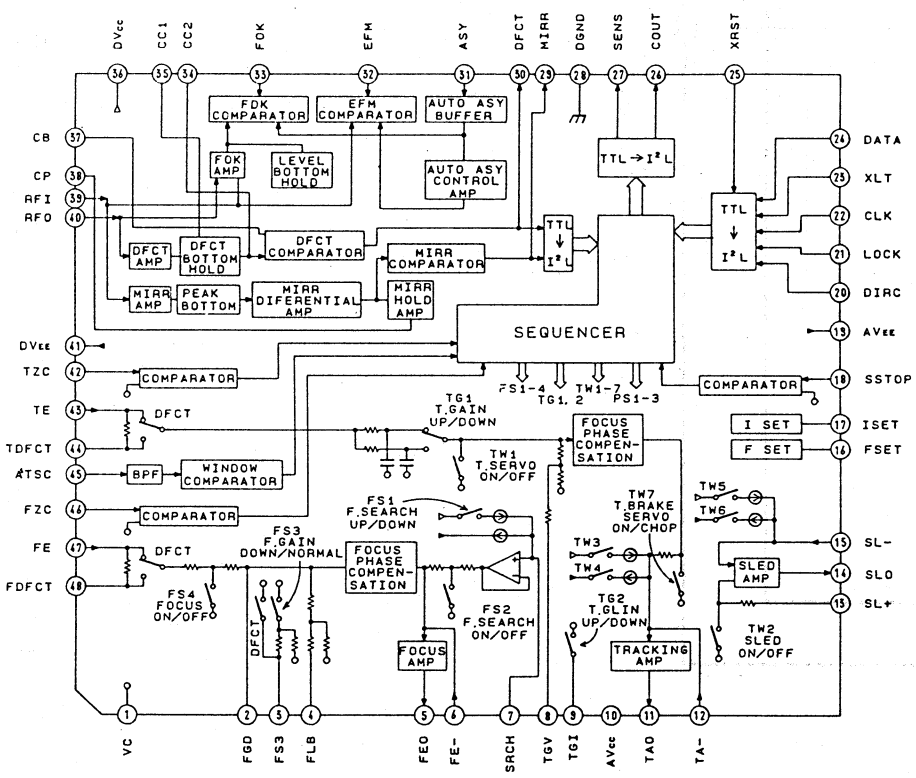
- IC203 CXD2554M (BD BOARD)



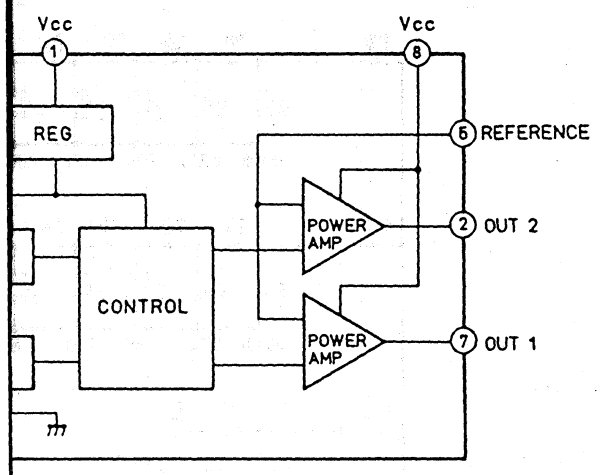
- IC981 LA5601 (MAIN BOARD)



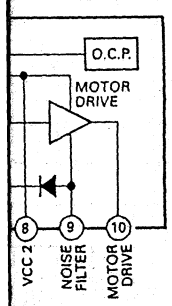
- IC101 CXA1372AQ (BD BOARD)

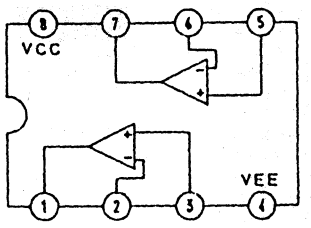


4641FP (BD BOARD)

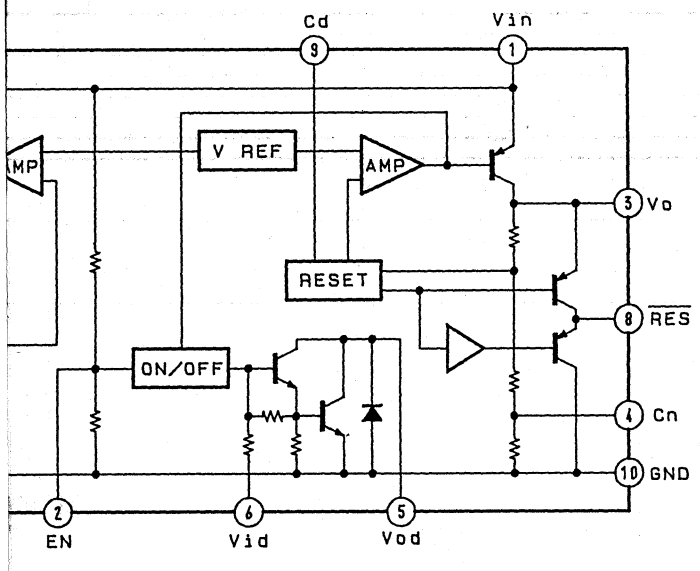


• IC701, 702 M5218AL (MAIN BOARD)





(MAIN BOARD)



SECTION 7
EXPLODED VIEWS

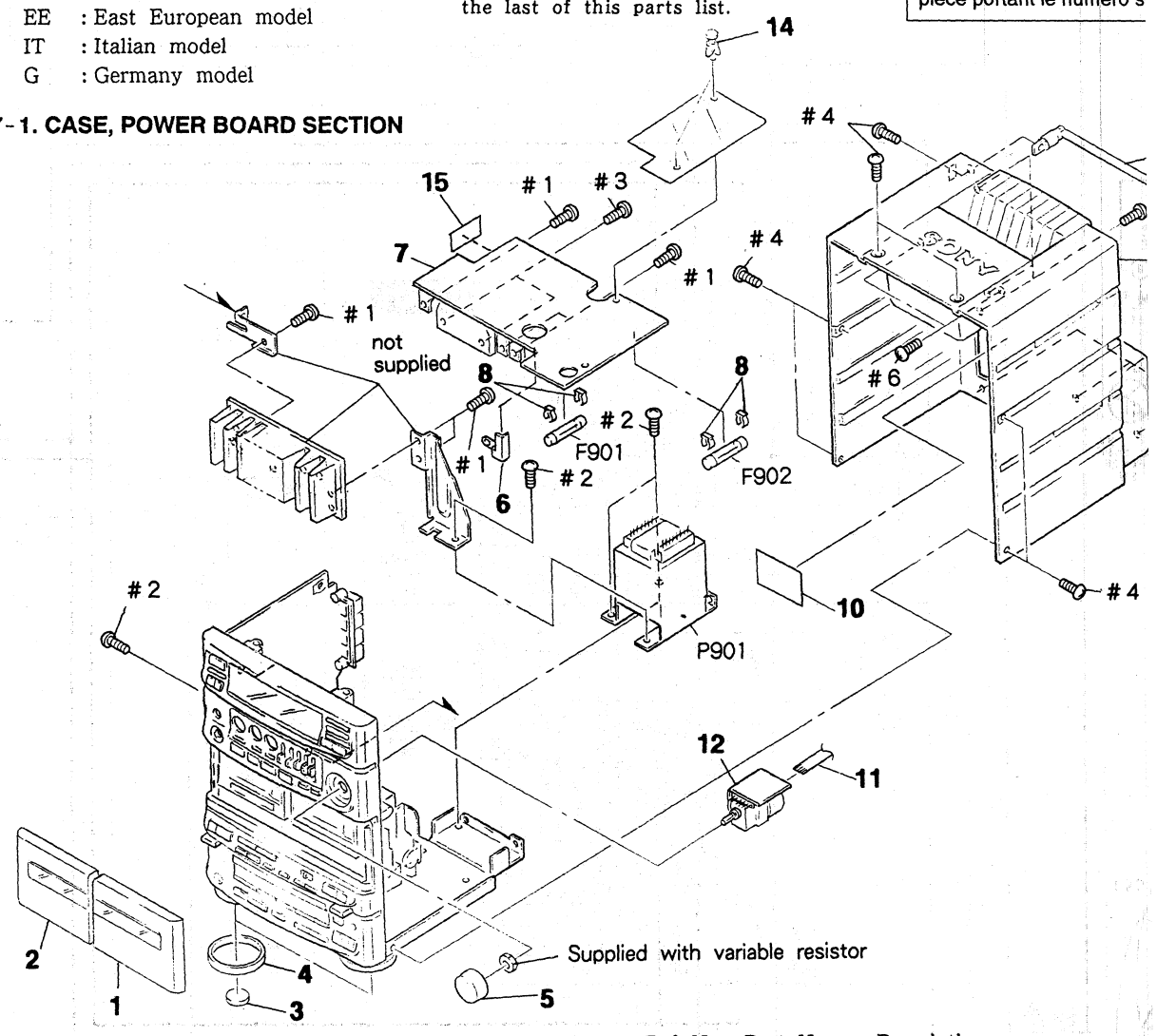
NOTE:

- −XX, −X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- CND : Canadian model
- EE : East European model
- IT : Italian model
- G : Germany model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components ident
mark ⚠ or dotted line w
⚠ are critical for safety.
Replace only with part
specified.

Les composants identi
une marque ⚠ sont
pour la sécurité.
Ne les remplacer que
pièce portant le numéro s

7-1. CASE, POWER BOARD SECTION



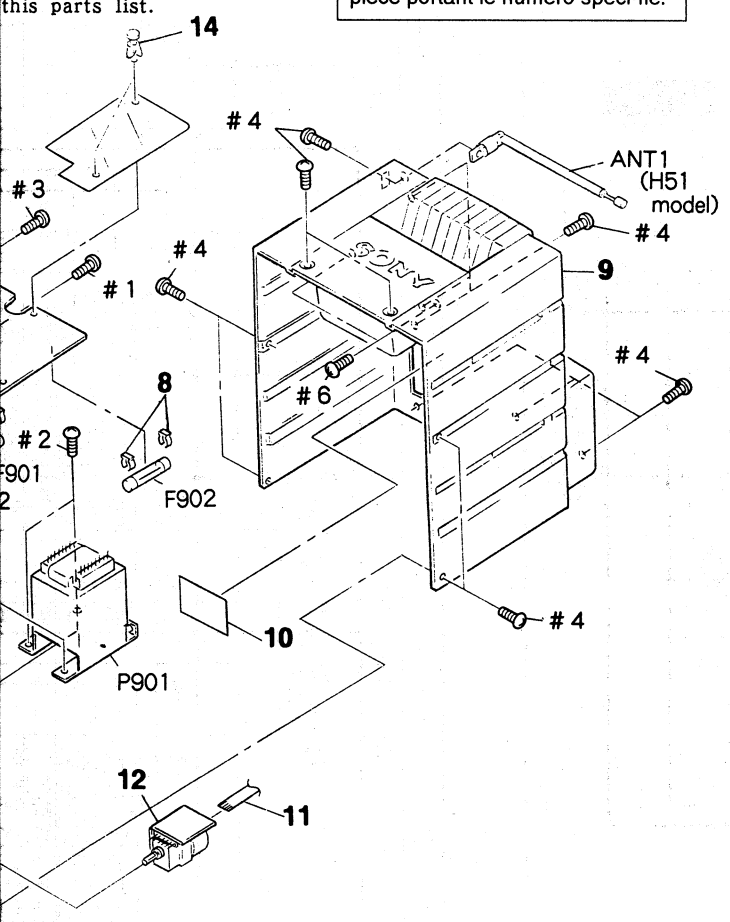
Ref. No.	Part No.	Description	Remarks
1	X-4943-232-1	LID (B) ASSY, CASSETTE (H51)	
1	X-4943-233-1	LID (B) ASSY, CASSETTE (H51M)	
2	X-4943-230-1	LID (A) ASSY, CASSETTE	
3	3-319-288-01	FOOT	
4	4-936-827-12	ORNAMENT (FOOT)	
5	4-956-322-01	KNOB (VOL)	
6	4-956-993-01	BRACKET, GROUND	
* 7	A-4356-745-A	POWER BOARD, COMPLETE (H51M:US, CND)	
* 7	A-4356-778-A	POWER BOARD, COMPLETE (H51:AEP, EE, CIS/H51M:AEP, UK)	
* 7	A-4356-783-A	POWER BOARD, COMPLETE (H51:G, IT)	
8	1-533-217-31	HOLDER, FUSE	
* 9	4-956-351-01	CASE (H51M)	
* 9	X-4943-236-1	CASE ASSY (H51)	
10	3-703-044-26	LABEL, CAUTION (H51M:US, CND)	
11	1-690-970-31	WIRE (FLAT TYPE) (13 CORE)	
* 12	1-647-265-11	VR BOARD	
14	4-812-134-31	RIVET NYLON, 3.5	
15	4-958-661-01	SHEET (INSULATED)	
ANT1	1-501-321-51	ANTENNA, TELESCOPIC (H51)	
⚠F901	1-532-215-00	FUSE (H51/H51M:AEP, UK)	
⚠F902	1-576-103-11	FUSE (H51M:US, CND)	
⚠P901	1-423-469-11	TRANSFORMER, POWER (H51/H51M:	
⚠P901	1-423-470-11	TRANSFORMER, POWER (H51M:US, C	

CTION 7
DED VIEWS

d "*" are not stocked
re seldom required for
ice. Some delay should
ed when ordering these

al parts with no reference
the exploded views are
.
mark) list is given in
this parts list.

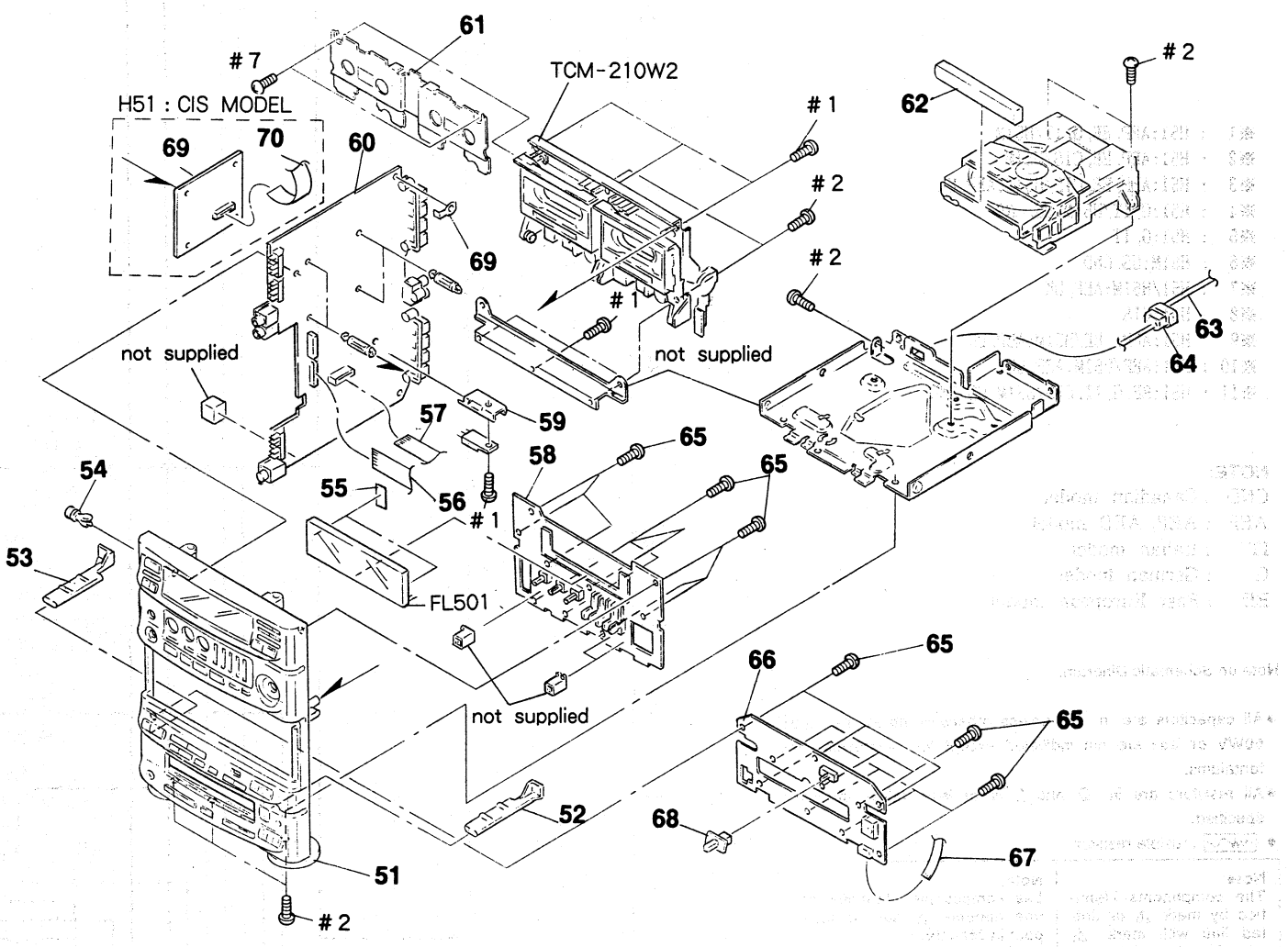
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spéci-fie.



upplied with variable resistor

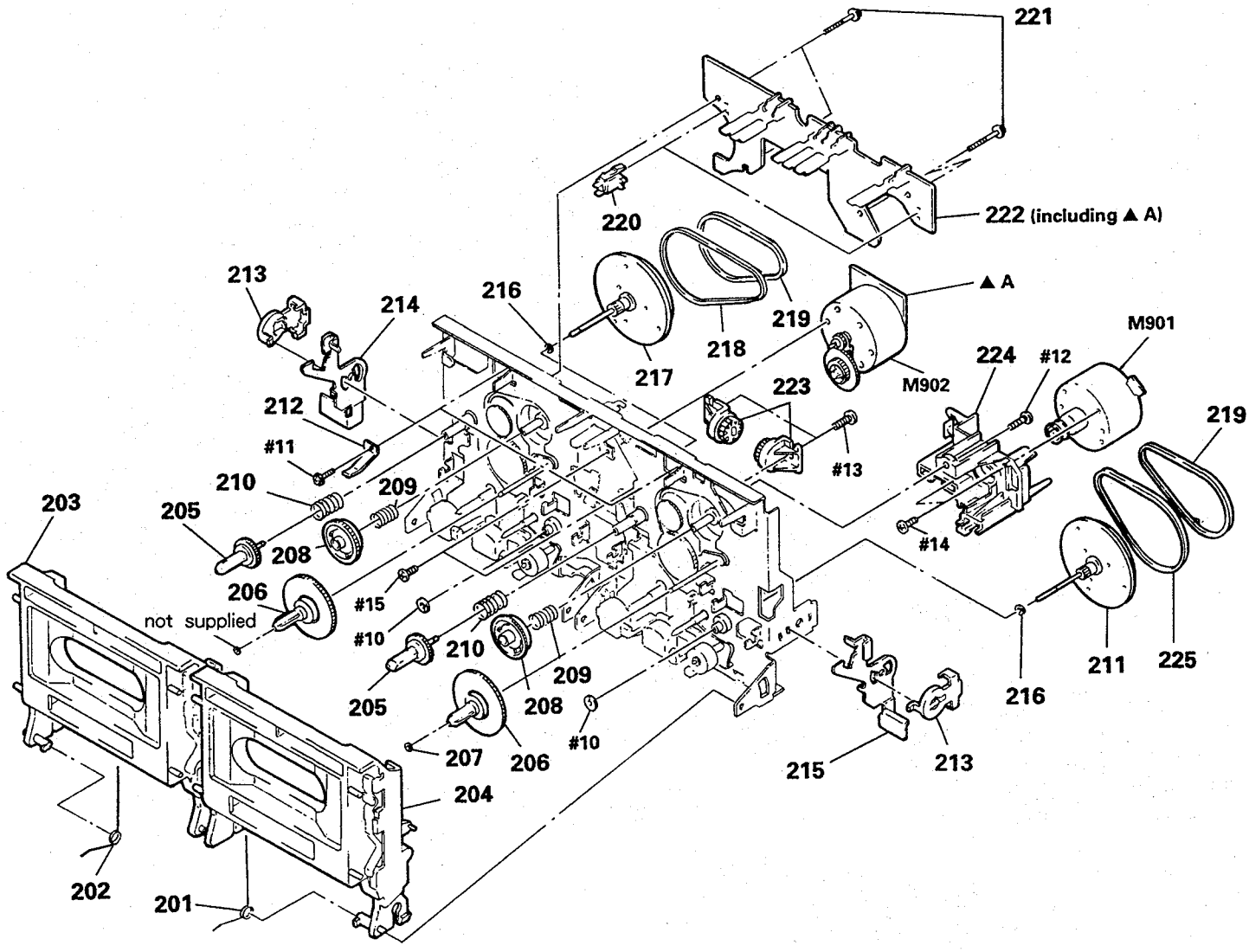
s	Ref. No.	Part No.	Description	Remarks
	* 9	4-956-351-01	CASE (H51M)	
	* 9	X-4943-236-1	CASE ASSY (H51)	
	10	3-703-044-26	LABEL, CAUTION (H51M:US, CND)	
	11	1-690-970-31	WIRE (FLAT TYPE) (13 CORE)	
	* 12	1-647-265-11	VR BOARD	
	14	4-812-134-31	RIVET NYLON, 3.5	
	15	4-958-661-01	SHEET (INSULATED)	
	ANT1	1-501-321-51	ANTENNA, TELESCOPIC (H51)	
	⚠F901	1-532-215-00	FUSE (H51/H51M:AEP, UK)	
	⚠F902	1-576-103-11	FUSE (H51M:US, CND)	
	⚠P901	1-423-469-11	TRANSFORMER, POWER (H51/H51M:AEP, UK)	
	⚠P901	1-423-470-11	TRANSFORMER, POWER (H51M:US, CND)	

7-2. FRONT PANEL, MAIN BOARD SECTION



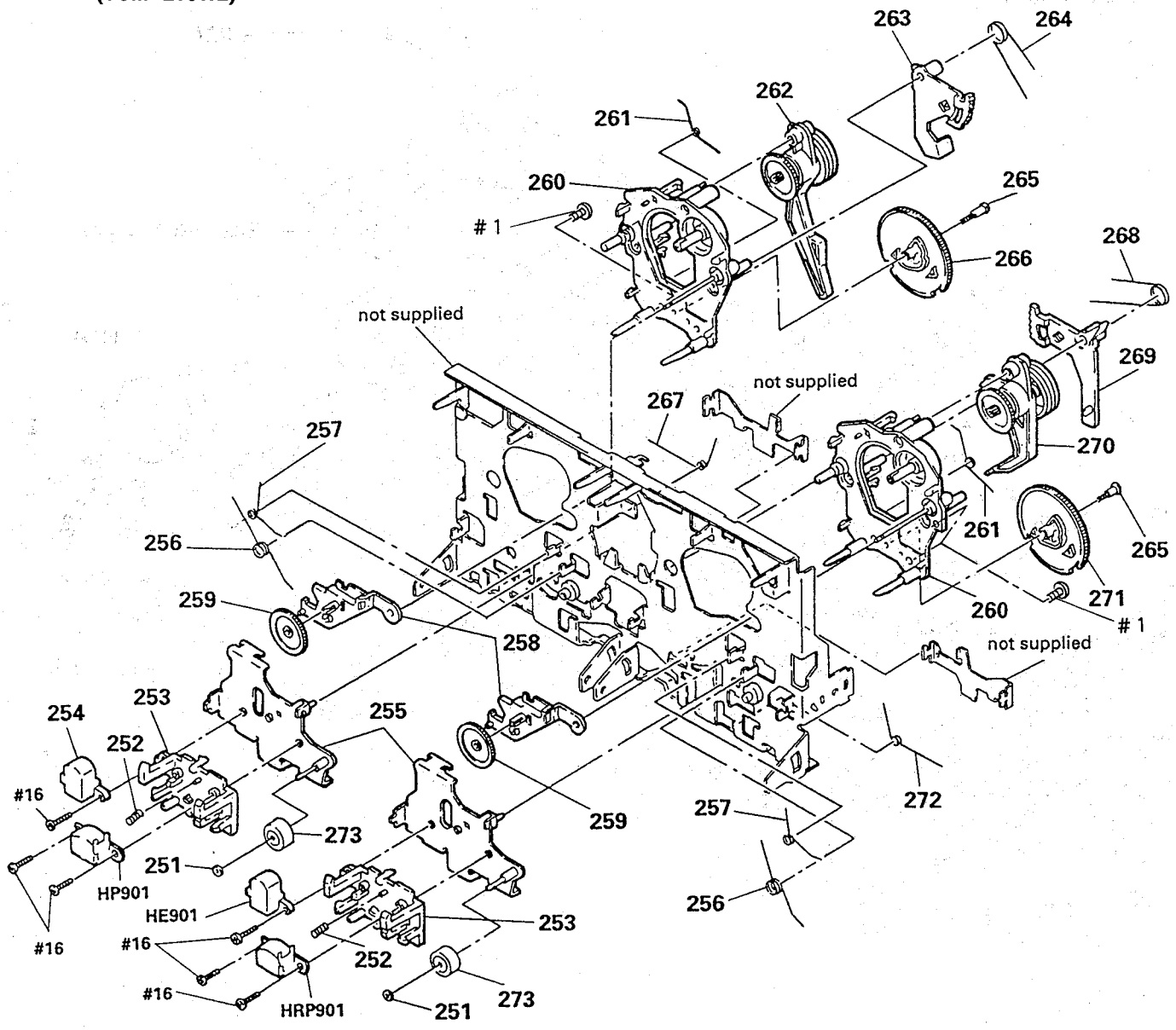
Ref. No.	Part No.	Description	Remarks
51	A-4353-207-A	PANEL ASSY, FRONT (H51/H51M:AEP, UK)	
51	A-4353-208-A	PANEL ASSY, FRONT (H51M:US, CND)	
52	4-956-353-01	BUTTON (EJECT-R)	
53	4-956-349-01	BUTTON (EJECT-L)	
54	4-812-134-31	RIVET NYLON, 3.5	
* 55	4-932-810-11	CUSHION (FL)	
56	1-751-027-41	WIRE (FLAT TYPE) (19 CORE)	
57	1-751-042-31	WIRE (FLAT TYPE) (13 CORE)	
* 58	A-4356-744-A	DISPLAY BOARD, COMPLETE (H51M:US, CND)	
* 58	A-4356-777-A	DISPLAY BOARD, COMPLETE (H51:AEP/H51M:AEP, UK)	
* 58	A-4356-779-A	DISPLAY BOARD, COMPLETE (H51:EE)	
* 58	A-4356-780-A	DISPLAY BOARD, COMPLETE (H51:CIS)	
* 58	A-4356-781-A	DISPLAY BOARD, COMPLETE (H51:G)	
* 58	A-4356-782-A	DISPLAY BOARD, COMPLETE (H51:IT)	
* 59	3-309-144-31	HEAT SINK	
* 60	A-4356-784-A	MAIN BOARD, COMPLETE (H51:AEP/H51M:AEP, UK)	
* 60	A-4356-785-A	MAIN BOARD, COMPLETE (H51:CIS)	
* 60	A-4356-786-A	MAIN BOARD, COMPLETE (H51:G, IT)	
* 60	A-4356-800-A	MAIN BOARD, COMPLETE (H51:EE)	
* 60	A-4356-757-A	MAIN BOARD, COMPLETE (H51M:US, CND)	
61	4-955-333-01	PLATE (CASSETTE), ORNAMENTAL	
62	4-956-474-01	PANEL, LOADING	
⚠63	1-558-945-21	CORD, POWER (POLAR. SPT-1) (H51M:US, CND)	
⚠63	1-575-651-81	CORD, POWER (H51/H51M:AEP)	
⚠63	1-696-586-11	CORD, POWER (H51M:UK)	
* 64	3-703-244-00	BUSHING (2104), CORD	
65	4-951-620-01	SCREW (2.6X8), +BVTP	
* 66	A-4356-769-A	SW BOARD, COMPLETE	
67	1-751-034-11	WIRE (FLAT TYPE) (7 CORE)	
* 68	4-925-530-01	PLATE, GROUND	
68	4-956-476-01	KNOB (DIRECTION/DOLBY)	
* 69	A-4347-500-A	POLAR BOARD, COMPLETE (H51:CIS)	
70	1-690-589-31	WIRE, FLAT TYPE (13 CORE) (H51:CIS)	
FL501	1-517-122-11	INDICATOR TUBE, FLUORESCENT	

7-3. MECHANISM SECTION-1
(TCM-210W2)



Ref. No.	Part No.	Description	Remarks
201	3-381-788-01	SPRING (LOADING B), TORSION	
202	3-381-787-01	SPRING (LOADING A), TORSION	
203	X-3365-440-1	HOLDER (A) ASSY, CASSETTE	
204	X-3365-441-1	HOLDER (B) ASSY, CASSETTE	
205	3-382-524-01	GEAR (S SIDE REEL)	
206	X-3365-559-1	TABLE (T) ASSY, REEL	
208	X-3365-447-1	GEAR (FF) ASSY	
209	3-382-078-01	SPRING (FF), COMPRESSION	
210	3-358-208-01	SPRING (SUPPLY), COMPRESSION	
211	X-3365-438-1	FLYWHEEL (B) ASSY	
212	3-382-929-01	SPRING(CASSETTE DETENT), LEAF	
213	3-354-957-01	JOINT (LOCK LEVER)	
* 214	3-367-709-01	LEVER (LOCK LEVER L)	
* 215	3-367-710-01	LEVER (LOCK LEVER R)	
216	3-701-437-11	WASHER	
217	X-3365-437-1	FLYWHEEL (A) ASSYLAY	
218	3-382-859-02	BELT (CAPSTAN A)	
219	4-928-951-01	BELT (CAPSTAN)	
* 220	3-381-776-01	HOLDER (LED)	
221	3-355-801-01	SCREW (BTP 2X18)	
* 222	1-644-686-21	LEAF SWITCH BOARD	
223	4-919-393-31	DAMPER	
224	3-381-777-01	BRACKET	
225	3-382-860-02	BELT (CAPSTAN B)	
M901	X-3362-377-1	MOTOR (WH) ASSY	
M902	A-2004-188-A	MOTOR ASSY, DC	

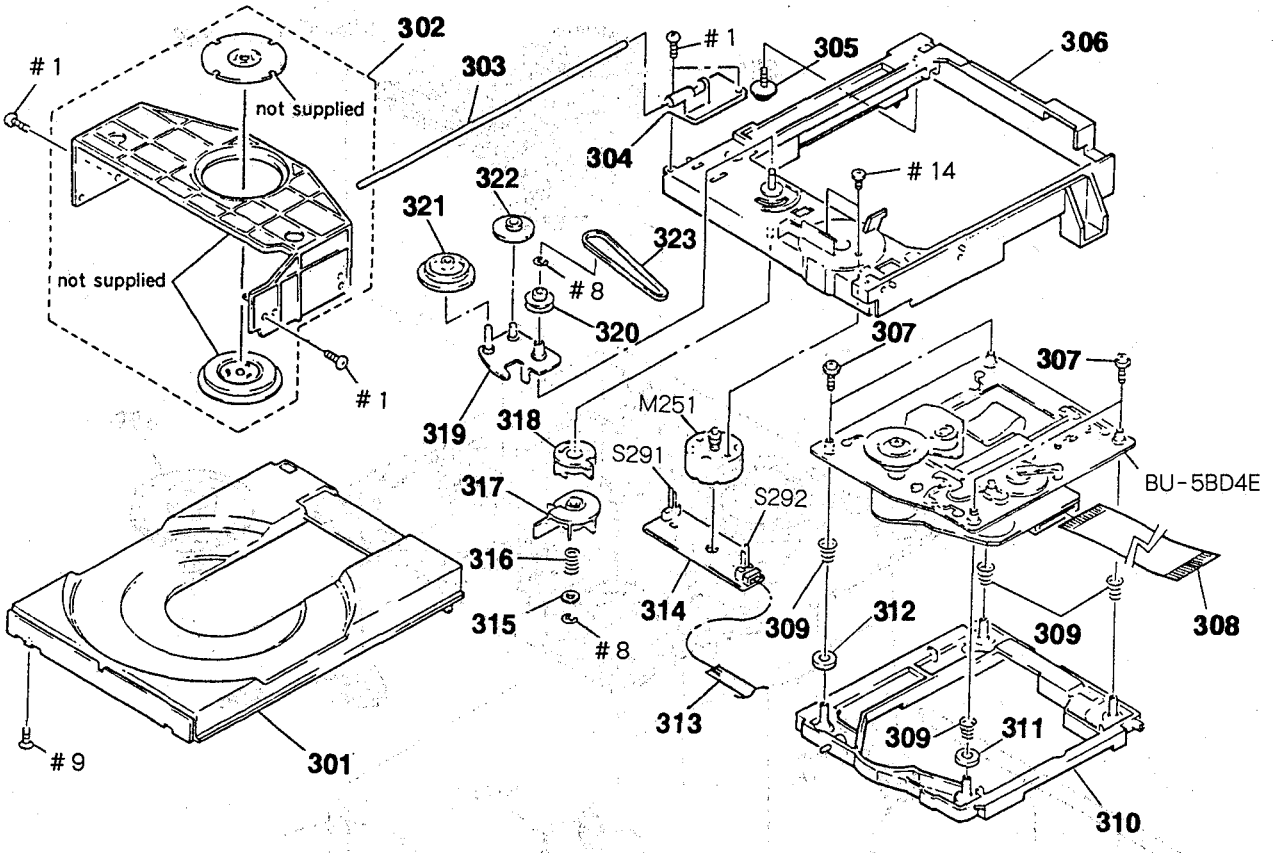
7-4. MECHANISM SECTION-2
(TCM-210W2)



Ref. No.	Part No.	Description	Remarks
251	3-669-465-00	WASHER (1.5), STOPPER	
252	3-343-484-01	SPRING, COMPRESSION	
253	3-381-778-01	HOLDER (HEAD)	
254	3-319-716-01	GUIDE, TAPE	
255	X-3365-814-1	SLIDER (HEAD) ASSY	
256	3-382-076-01	SPRING (HEAD), TORSION	
257	3-382-077-01	SPRING (TU), TORSION	
258	3-381-785-01	LEVER (TU)	
* 259	3-358-284-01	GEAR (TU GEAR)	
* 260	X-3365-443-1	CHASSIS (M) ASSY	
261	3-383-498-01	SPRING (CAM), TORSION	
262	X-3365-444-1	LEVER (FR ARM A) ASSY	
263	3-381-781-01	LEVER (TRIGGER A)	

Ref. No.	Part No.	Description	Remarks
264	3-382-074-01	SPRING (TRIGGER A), TORSION	
265	3-381-810-11	SCREW, STEP	
266	3-381-779-01	CAM (A)	
267	3-383-056-02	SPRING (SLIDER A), TORSION	
268	3-382-075-01	SPRING (TRIGGER B), TORSION	
269	3-381-782-01	LEVER (TRIGGER B)	
270	X-3365-445-1	LEVER (FR ARM B) ASSY	
271	3-381-780-01	CAM (B)	
272	3-383-057-02	SPRING (SLIDER B), TORSION	
273	3-355-808-21	PINCH ROLLER	
HE901	1-543-673-11	HEAD, MAGNETIC (ERASE)	
HP901	1-543-940-11	HEAD, MAGNETIC (PLAYBACK)	
HRP901	1-543-319-11	HEAD, MAGNETIC (REC/PB)	

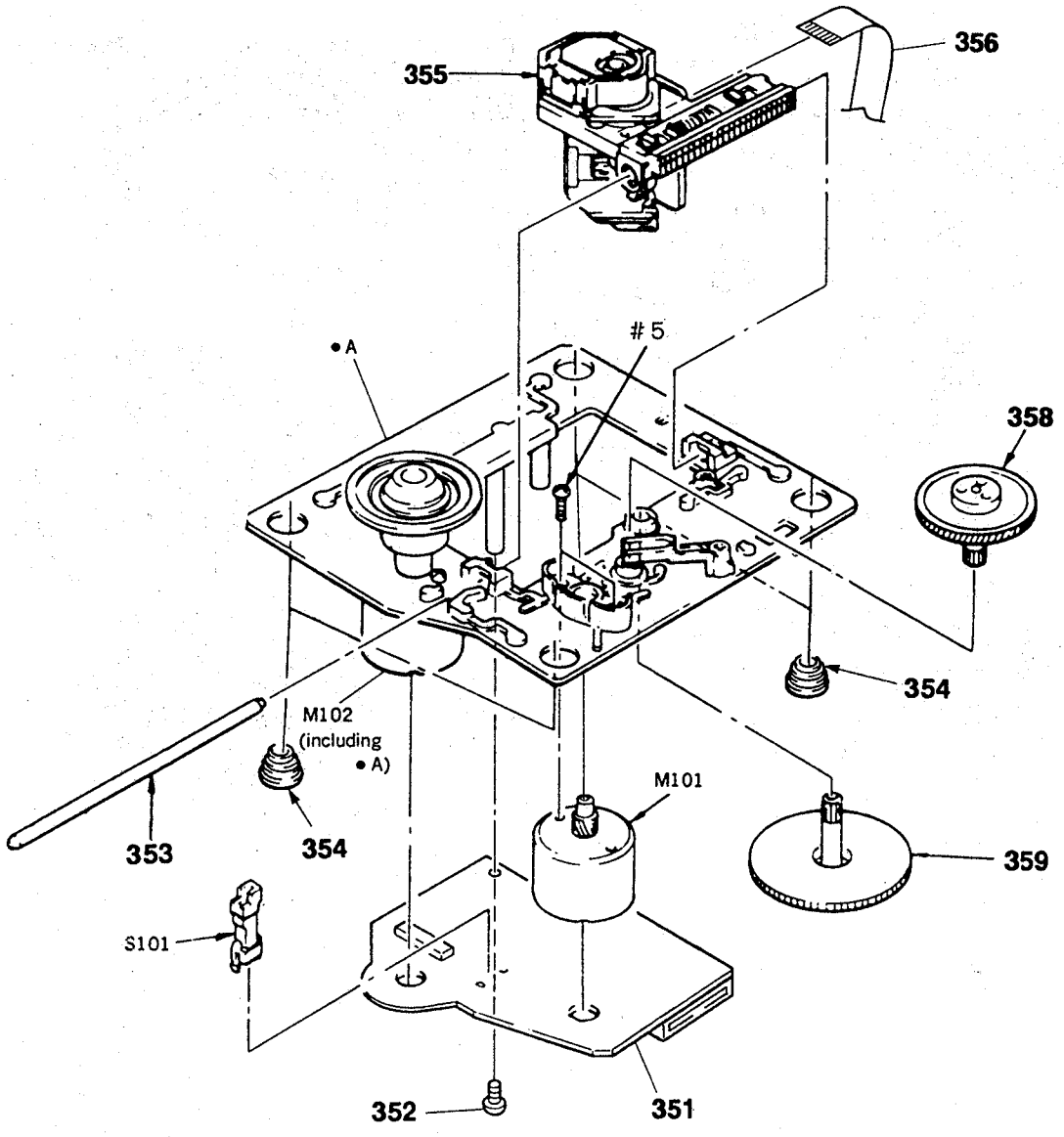
7-5. CD SECTION-1 (CDM138B-5BD4E)



Ref. No.	Part No.	Description	Remarks
301	4-944-012-01	TABLE, DISC	
302	A-4604-752-A	HOLDER (MG) ASSY	
303	4-929-764-01	SHAFT (TABLE GUIDE)	
304	4-944-006-01	BEARING	
* 305	4-917-583-21	BRACKET, YOKE	
306	X-4941-462-1	CHASSIS (MD) ASSY	
307	4-933-134-01	SCREW (+PTPWH M2.6X6)	
308	1-751-027-41	WIRE (FLAT TYPE) (19 CORE)	
309	4-958-593-01	SPRING (BU), COMPRESSION	
310	4-929-747-01	HOLDER (BU)	
311	3-701-445-21	WASHER, 7	
312	3-701-445-11	WASHER, 7	
313	1-751-109-11	WIRE (FLAT TYPE) (5 CORE)	

Ref. No.	Part No.	Description	Remarks
* 314	1-638-308-11	LOADING BOARD	
315	4-927-654-01	WASHER (LIMITER)	
316	3-659-338-00	SPRING, COMPRESSION	
317	4-929-727-01	CAM (A)	
318	4-929-729-01	CAM (B)	
319	X-4929-703-1	ARM ASSY, SWING	
320	4-929-724-01	PULLEY (B)	
321	4-927-620-01	GEAR (P)	
322	4-927-628-01	GEAR (C)	
323	4-927-649-01	BELT	
M251	A-4660-307-A	MOTOR (L) ASSY	
S291	1-571-924-11	SWITCH, LEAF	
S292	1-571-924-11	SWITCH, LEAF	

7-6. CD SECTION-2 (BU-5BD4E)



Ref. No.	Part No.	Description	Remarks
* 351	A-4649-592-A	BD (A) BOARD, COMPLETE	
352	4-951-620-01	SCREW (2.6X8), +BVTP	
353	4-917-565-01	SHAFT, SLED	
354	4-951-940-01	INSULATOR (BU)	
⚠355	8-848-144-11	DEVICE, OPTICAL KSS-240A	

Ref. No.	Part No.	Description	Remarks
356	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
358	4-917-567-01	GEAR (M)	
359	4-917-564-01	GEAR (P), FLATNESS	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	MOTOR ASSY (SPINDLE)	
S101	1-572-085-11	SWITCH, LEAF	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 8
ELECTRICAL PARTS LIST

BD

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spéci-fie.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- −XX, −X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL : metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA... : μA... , uPA... , μPA... , uPB... , μPB... , uPC... , μPC... , uPD..., μPD...
- CAPACITORS :
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remarks
*	A-4649-592-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-607-11	ELECT CHIP	47uF	20%	4V
C106	1-126-607-11	ELECT CHIP	47uF	20%	4V
C107	1-126-607-11	ELECT CHIP	47uF	20%	4V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-164-346-11	CERAMIC CHIP	1uF		16V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C115	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C152	1-164-346-11	CERAMIC CHIP	1uF		16V
C153	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C154	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C201	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C202	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C203	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C204	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C205	1-164-346-11	CERAMIC CHIP	1uF		16V
C206	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C207	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C208	1-164-346-11	CERAMIC CHIP	1uF		16V
C209	1-164-346-11	CERAMIC CHIP	1uF		16V
C210	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C299	1-164-346-11	CERAMIC CHIP	1uF		16V
C301	1-164-346-11	CERAMIC CHIP	1uF		16V
C302	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C303	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C304	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C305	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C306	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C307	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C308	1-164-346-11	CERAMIC CHIP	1uF		16V
C309	1-164-346-11	CERAMIC CHIP	1uF		16V
C310	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C311	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C312	1-164-346-11	CERAMIC CHIP	1uF		16V
C401	1-164-232-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
CN101	1-580-858-11	SOCKET, CONNECTOR (SMT) 5P			
CN102	1-580-866-11	SOCKET, CONNECTOR (SMT) 12P			
CN103	1-580-872-41	SOCKET, CONNECTOR (SMT) 19P			
		< DIODE >			
D101	8-719-422-12	DIODE MA8039			
D201	8-719-016-74	DIODE 1SS352			
		< IC >			
IC101	8-752-053-73	IC CXA1372AQ			
IC102	8-759-823-48	IC LA6525M			
IC103	8-759-636-20	IC M54641FP			
IC201	8-752-352-93	IC CXD2500BQ			
IC202	8-759-059-86	IC uPD75116GF-F21-3BE			
IC203	8-759-098-27	IC MSM6538-01GS-VKR1			
IC301	8-759-155-52	IC PCM-67U-B			
IC302	8-759-996-43	IC RC4558PS			

BD | **DISPLAY** | **POWER** | **SW**

Ref. No.	Part No.	Description			Remarks
		< JUMPER CHIP >			
J201	1-216-296-00	METAL CHIP	0	5%	1/8W
J203	1-216-296-00	METAL CHIP	0	5%	1/8W
J205	1-216-295-00	METAL CHIP	0	5%	1/10W
J206	1-216-296-00	METAL CHIP	0	5%	1/8W
J207	1-216-296-00	METAL CHIP	0	5%	1/8W
J208	1-216-295-00	METAL CHIP	0	5%	1/10W
J209	1-216-296-00	METAL CHIP	0	5%	1/8W
J210	1-216-296-00	METAL CHIP	0	5%	1/8W
J211	1-216-296-00	METAL CHIP	0	5%	1/8W
J212	1-216-296-00	METAL CHIP	0	5%	1/8W
J215	1-216-295-00	METAL CHIP	0	5%	1/10W
		< TRANSISTOR >			
Q101	8-729-805-45	TRANSISTOR	2SC3395		
Q201	8-729-602-21	TRANSISTOR	2SC4154		
		< RESISTOR >			
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-236-427-11	NETWORK, RES	18K		
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W
R201	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R204	1-216-073-00	METAL CHIP	10K	5%	1/10W
R205	1-216-097-00	METAL CHIP	100K	5%	1/10W
R209	1-216-081-00	METAL CHIP	22K	5%	1/10W
R212	1-239-039-11	RESISTOR, NETWORK (22KX4)			
R214	1-239-039-11	RESISTOR, NETWORK (22KX4)			
R218	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R219	1-216-073-00	METAL CHIP	10K	5%	1/10W
R220	1-216-001-00	METAL CHIP	10	5%	1/10W
R222	1-236-427-11	NETWORK, RES	18K		
R223	1-216-081-00	METAL CHIP	22K	5%	1/10W
R224	1-216-081-00	METAL CHIP	22K	5%	1/10W
R225	1-216-081-00	METAL CHIP	22K	5%	1/10W
R226	1-216-081-00	METAL CHIP	22K	5%	1/10W
R230	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R231	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R232	1-216-041-00	METAL CHIP	470	5%	1/10W
R233	1-216-041-00	METAL CHIP	470	5%	1/10W
R234	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R235	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R236	1-236-413-11	NETWORK, RES	1.2K		
R301	1-236-413-11	NETWORK, RES	1.2K		
R303	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R304	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R305	1-216-097-00	METAL CHIP	100K	5%	1/10W
R306	1-216-097-00	METAL CHIP	100K	5%	1/10W
		< VARIABLE RESISTOR >			
RV101	1-241-395-11	RES, ADJ, METAL GLAZE 10K			
RV102	1-241-395-11	RES, ADJ, METAL GLAZE 10K			
		< VIBRATOR >			
X201	1-567-908-11	VIBRATOR, CRYSTAL 16MHz			
X202	1-579-216-11	VIBRATOR, CERAMIC 4MHz			

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* A-4356-744-A DISPLAY BOARD, COMPLETE (H51M:US, CND)
****

* A-4356-777-A DISPLAY BOARD, COMPLETE
****
(H51:AEP/H51M:AEP, UK)

* A-4356-779-A DISPLAY BOARD, COMPLETE H51:EE
****

* A-4356-780-A DISPLAY BOARD, COMPLETE H51:CIS
****

* A-4356-781-A DISPLAY BOARD, COMPLETE H51:G
****

* A-4356-782-A DISPLAY BOARD, COMPLETE H51:IT
****

Ref. No.	Part No.	Description	Remarks
*	A-4356-745-A	POWER BOARD, COMPLETE (H51M:US, CND)	
		**********	
*	A-4356-778-A	POWER BOARD, COMPLETE	
		**********	
		(H51:AEP, EE, CIS/H51M:AEP, UK)	
*	A-4356-783-A	POWER BOARD, COMPLETE (H51:G, IT)	
		**********	
*	A-4356-769-A	SW BOARD, COMPLETE	
		**********	
	1-533-217-31	HOLDER, FUSE	
*	4-932-810-11	CUSHION (FL)	
	4-956-993-01	BRACKET, GROUND	
		< CAPACITOR >	
C501	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C502	1-124-584-00	ELECT 100uF 20% 10V	
C503	1-124-584-00	ELECT 100uF 20% 10V	
C504	1-124-584-00	ELECT 100uF 20% 10V	
C505	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C506	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C507	1-162-201-31	CERAMIC 12PF 5% 50V	
C508	1-162-201-31	CERAMIC 12PF 5% 50V	
C509	1-124-242-00	ELECT 33uF 20% 25V	
C510	1-136-161-00	FILM 0.047uF 5% 50V	
C511	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C512	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C513	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C514	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C515	1-124-248-00	ELECT 22uF 20% 35V	
C571	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C572	1-126-157-11	ELECT 10uF 20% 16V	
C601	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C602	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C603	1-161-494-00	CERAMIC 0.022uF 25V	
C604	1-161-327-00	CERAMIC 0.0033uF 30% 16V	
C605	1-164-159-11	CERAMIC 0.1uF 50V	
C606	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C607	1-124-464-11	ELECT 0.22uF 20% 50V	
C608	1-164-159-11	CERAMIC 0.1uF 50V	
C609	1-124-252-00	ELECT 0.33uF 20% 50V	
C611	1-164-159-11	CERAMIC 0.1uF 50V	
C612	1-124-254-00	ELECT 0.68uF 20% 50V	
C613	1-162-282-31	CERAMIC 100PF 10% 50V	
C614	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C615	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C616	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C617	1-162-282-31	CERAMIC 100PF 10% 50V	
C618	1-126-160-11	ELECT 1uF 20% 50V	
C619	1-126-160-11	ELECT 1uF 20% 50V	
C620	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C651	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C652	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C653	1-161-494-00	CERAMIC 0.022uF 25V	
C654	1-161-327-00	CERAMIC 0.0033uF 30% 16V	
C655	1-164-159-11	CERAMIC 0.1uF 50V	
C656	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C657	1-124-464-11	ELECT 0.22uF 20% 50V	
C658	1-164-159-11	CERAMIC 0.1uF 50V	
C659	1-124-252-00	ELECT 0.33uF 20% 50V	
C661	1-164-159-11	CERAMIC 0.1uF 50V	
C662	1-124-254-00	ELECT 0.68uF 20% 50V	
C663	1-162-282-31	CERAMIC 100PF 10% 50V	
C664	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C665	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C666	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C667	1-162-282-31	CERAMIC 100PF 10% 50V	
C668	1-126-157-11	ELECT 10uF 20% 16V	
C669	1-126-160-11	ELECT 1uF 20% 50V	
C801	1-162-282-31	CERAMIC 100PF 10% 50V	
C802	1-124-261-00	ELECT 10uF 20% 50V	
C803	1-162-282-31	CERAMIC 100PF 10% 50V	
C804	1-162-282-31	CERAMIC 100PF 10% 50V	
C805	1-124-916-11	ELECT 22uF 20% 63V	
C806	1-124-910-11	ELECT 47uF 20% 50V	
C807	1-164-159-11	CERAMIC 0.1uF 50V	
C808	1-164-159-11	CERAMIC 0.1uF 50V	
C809	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C810	1-124-910-11	ELECT 47uF 20% 50V	
C811	1-124-120-11	ELECT 220uF 20% 25V	
C851	1-162-282-31	CERAMIC 100PF 10% 50V	
C852	1-124-261-00	ELECT 10uF 20% 50V	
C853	1-162-282-31	CERAMIC 100PF 10% 50V	
C854	1-162-282-31	CERAMIC 100PF 10% 50V	
C855	1-124-916-11	ELECT 22uF 20% 63V	
C856	1-124-910-11	ELECT 47uF 20% 50V	
C857	1-164-159-11	CERAMIC 0.1uF 50V	
C858	1-164-159-11	CERAMIC 0.1uF 50V	
C859	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C860	1-124-261-00	ELECT 10uF 20% 50V	
C861	1-124-484-11	ELECT 220uF 20% 35V	
C901	1-164-159-11	CERAMIC 0.1uF 50V	
C902	1-164-159-11	CERAMIC 0.1uF 50V	
C903	1-124-618-11	ELECT 2200uF 20% 35V	
C904	1-124-618-11	ELECT 2200uF 20% 35V	
C905	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C906	1-124-261-00	ELECT 10uF 20% 50V	
C907	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C908	1-126-163-11	ELECT 4.7uF 20% 50V	
C909	1-161-379-00	CERAMIC 0.01uF 20% 25V	

DISPLAY | POWER | SW

Ref. No.	Part No.	Description				Remarks
C910	1-126-163-11	ELECT	4.7uF	20%	50V	
C911	1-126-163-11	ELECT	4.7uF	20%	50V	
C912	1-126-163-11	ELECT	4.7uF	20%	50V	
C913	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C914	1-124-261-00	ELECT	10uF	20%	50V	
C915	1-126-163-11	ELECT	4.7uF	20%	50V	
C916	1-124-564-11	ELECT	4700uF	20%	25V	
C917	1-124-563-11	ELECT	2200uF	20%	25V	
C918	1-124-257-00	ELECT	2.2uF	20%	50V	
C951	1-124-122-11	ELECT	100uF	20%	50V	
C952	1-124-122-11	ELECT	100uF	20%	50V	
C953	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C955	1-124-910-11	ELECT	47uF	20%	50V	
		< CONNECTOR >				
* CN381	1-569-156-11	SOCKET, CONNECTOR 10P				
* CN501	1-569-156-11	SOCKET, CONNECTOR 10P				
* CN502	1-573-049-11	SOCKET, CONNECTOR 11P				
CN503	1-691-644-11	SOCKET, CONNECTOR 7P				
CN504	1-750-176-11	HOUSING, CONNECTOR(PC BOARD)15P				
* CN571	1-568-850-11	SOCKET, CONNECTOR 7P				
* CN801	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P				
* CN901	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P				
* CN902	1-564-717-11	PIN, CONNECTOR (SMALL TYPE)15P				
		< CONPOSITION CIRCUIT BLOCK >				
CP501	1-239-584-21	COMPOSITION CIRCUIT BLOCK 12PFX15				
CP502	1-239-584-21	COMPOSITION CIRCUIT BLOCK 12PFX15				
		< DIODE >				
D381	8-719-038-54	DIODE	SEL6414E-LC05(▶)			
D382	8-719-038-53	DIODE	SEL6214S-LC05 (HIGH SPEED DUBBING)			
D383	8-719-038-57	DIODE	SEL6914A-LC05(▮▮)			
D384	8-719-038-53	DIODE	SEL6214S-LC05(●)			
D385	8-719-038-54	DIODE	SEL6414E-LC05(▶)			
D501	8-719-301-37	LED	SEL2210S-CD (DBFB)			
D505	8-719-301-37	LED	SEL2210S-CD (S-SUR)			
D506	8-719-987-63	DIODE	1N4148M			
D507	8-719-987-63	DIODE	1N4148M			
D508	8-719-987-63	DIODE	1N4148M			
D509	8-719-987-63	DIODE	1N4148M			
D510	8-719-987-63	DIODE	1N4148M			
D821	8-719-987-63	DIODE	1N4148M			
D901	8-719-312-09	DIODE	RBA-402			
D902	8-719-200-82	DIODE	11ES2			
D903	8-719-200-82	DIODE	11ES2			
D904	8-719-200-82	DIODE	11ES2			
D905	8-719-200-82	DIODE	11ES2			

Ref. No.	Part No.	Description		Remarks
D906	8-719-933-36	DIODE	HZS6B1L	
D907	8-719-200-82	DIODE	11ES2	
D951	8-719-200-82	DIODE	11ES2	
D952	8-719-200-82	DIODE	11ES2	
D953	8-719-934-18	LED	HZS27-2L	
D954	8-719-014-80	DIODE	UZP-6.2BC	
		< FLUORESCENT >		
FL501	1-517-122-11	INDICATOR TUBE, FLUORESCENT		
		< IC >		
IC501	8-759-088-85	IC	uPD78042GF	
IC502	8-759-500-31	IC	X24C01P	
IC503	8-759-520-98	IC	PST572K	
IC504	8-759-510-54	IC	PST572D	
IC571	8-749-923-34	IC	GP1U59XB	
IC601	8-759-630-99	IC	M5226FP	
IC651	8-759-630-99	IC	M5226FP	
IC801	8-749-920-13	IC	STK-4132MK2	
IC901	8-759-602-66	IC	M5230L-A	
		< TRANSISTOR >		
Q501	8-729-900-61	TRANSISTOR	DTA114ES	
Q502	8-729-119-78	TRANSISTOR	2SC2785-HFE	
Q601	8-729-141-26	TRANSISTOR	2SC3622A-LK	
Q602	8-729-224-61	TRANSISTOR	2SK246-Y	
Q603	8-729-900-61	TRANSISTOR	DTA114ES	
Q604	8-729-224-61	TRANSISTOR	2SK246-Y	
Q651	8-729-141-26	TRANSISTOR	2SC3622A-LK	
Q652	8-729-224-61	TRANSISTOR	2SK246-Y	
Q901	8-729-209-15	TRANSISTOR	2SD2012	
Q902	8-729-209-15	TRANSISTOR	2SD2012	
Q903	8-729-141-83	TRANSISTOR	2SA473	
Q904	8-729-900-80	TRANSISTOR	DTC114ES	
		< RESISTOR >		
R381	1-249-419-11	CARBON	1.5K 5% 1/4W F	
R382	1-249-421-11	CARBON	2.2K 5% 1/4W F	
R383	1-249-424-11	CARBON	3.9K 5% 1/4W F	
R384	1-249-426-11	CARBON	5.6K 5% 1/4W	
R385	1-249-430-11	CARBON	12K 5% 1/4W	
R386	1-249-419-11	CARBON	1.5K 5% 1/4W F	
R387	1-249-421-11	CARBON	2.2K 5% 1/4W F	
R388	1-249-429-11	CARBON	10K 5% 1/4W	
R389	1-249-430-11	CARBON	12K 5% 1/4W	
R501	1-249-405-11	CARBON	100 5% 1/4W F	

Ref. No.	Part No.	Description				Remarks
R502	1-249-405-11	CARBON	100	5%	1/4W F	
R503	1-249-405-11	CARBON	100	5%	1/4W F	
R504	1-249-405-11	CARBON	100	5%	1/4W F	
R505	1-249-405-11	CARBON	100	5%	1/4W F	
R506	1-249-405-11	CARBON	100	5%	1/4W F	
R507	1-249-405-11	CARBON	100	5%	1/4W F	
R508	1-249-411-11	CARBON	330	5%	1/4W	
R509	1-249-429-11	CARBON	10K	5%	1/4W	
R510	1-249-429-11	CARBON	10K	5%	1/4W	
R511	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R512	1-249-417-11	CARBON	1K	5%	1/4W F	
R513	1-249-393-11	CARBON	10	5%	1/4W F	
R514	1-247-844-11	CARBON	3.6K	5%	1/4W	(H51M:US, CND)
R514	1-249-413-11	CARBON	470	5%	1/4W F	(H51:G)
R514	1-247-832-11	CARBON	1.1K	5%	1/4W	(H51:IT)
R514	1-249-426-11	CARBON	5.6K	5%	1/4W	(H51:EE)
R514	1-249-429-11	CARBON	10K	5%	1/4W	(H51:CIS)
R515	1-249-423-11	CARBON	3.3K	5%	1/4W F	
R516	1-249-413-11	CARBON	470	5%	1/4W F	
R517	1-249-415-11	CARBON	680	5%	1/4W F	
R518	1-249-417-11	CARBON	1K	5%	1/4W F	
R519	1-249-419-11	CARBON	1.5K	5%	1/4W F	
R520	1-249-421-11	CARBON	2.2K	5%	1/4W F	
R521	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R522	1-249-430-11	CARBON	12K	5%	1/4W	
R523	1-249-423-11	CARBON	3.3K	5%	1/4W F	
R524	1-249-413-11	CARBON	470	5%	1/4W F	
R525	1-249-415-11	CARBON	680	5%	1/4W F	
R526	1-249-417-11	CARBON	1K	5%	1/4W F	
R527	1-249-419-11	CARBON	1.5K	5%	1/4W F	
R528	1-249-421-11	CARBON	2.2K	5%	1/4W F	
R529	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R530	1-249-430-11	CARBON	12K	5%	1/4W	
R531	1-249-423-11	CARBON	3.3K	5%	1/4W F	
R532	1-249-413-11	CARBON	470	5%	1/4W F	
R533	1-249-415-11	CARBON	680	5%	1/4W F	
R534	1-249-417-11	CARBON	1K	5%	1/4W F	
R537	1-249-423-11	CARBON	3.3K	5%	1/4W F	
R538	1-249-423-11	CARBON	3.3K	5%	1/4W F	
R541	1-249-411-11	CARBON	330	5%	1/4W	
R542	1-249-405-11	CARBON	100	5%	1/4W F	
R543	1-249-405-11	CARBON	100	5%	1/4W F	
R544	1-249-405-11	CARBON	100	5%	1/4W F	
R545	1-249-405-11	CARBON	100	5%	1/4W F	
R546	1-249-405-11	CARBON	100	5%	1/4W F	
R547	1-249-405-11	CARBON	100	5%	1/4W F	
R548	1-249-405-11	CARBON	100	5%	1/4W F	
R549	1-249-405-11	CARBON	100	5%	1/4W F	

Ref. No.	Part No.	Description				Remarks
R550	1-249-405-11	CARBON	100	5%	1/4W F	
R551	1-249-405-11	CARBON	100	5%	1/4W F	
R552	1-249-405-11	CARBON	100	5%	1/4W F	
R553	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R554	1-249-429-11	CARBON	10K	5%	1/4W	
R555	1-249-429-11	CARBON	10K	5%	1/4W	
R556	1-249-423-11	CARBON	3.3K	5%	1/4W F	(H51:G, IT, EE, CIS/H51M:US, CND)
R561	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R563	1-249-429-11	CARBON	10K	5%	1/4W	
R564	1-249-421-11	CARBON	2.2K	5%	1/4W F	
R571	1-249-413-11	CARBON	470	5%	1/4W F	
R572	1-249-415-11	CARBON	680	5%	1/4W F	
R573	1-249-417-11	CARBON	1K	5%	1/4W F	
R574	1-249-419-11	CARBON	1.5K	5%	1/4W F	
R575	1-249-421-11	CARBON	2.2K	5%	1/4W F	
R576	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R577	1-249-430-11	CARBON	12K	5%	1/4W	
R578	1-249-413-11	CARBON	470	5%	1/4W F	
R579	1-249-415-11	CARBON	680	5%	1/4W F	
R580	1-249-417-11	CARBON	1K	5%	1/4W F	
R581	1-249-419-11	CARBON	1.5K	5%	1/4W F	
R582	1-249-421-11	CARBON	2.2K	5%	1/4W F	
R583	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R601	1-249-419-11	CARBON	1.5K	5%	1/4W F	
R602	1-249-441-11	CARBON	100K	5%	1/4W	
R603	1-249-441-11	CARBON	100K	5%	1/4W	
R604	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R605	1-249-413-11	CARBON	470	5%	1/4W F	
R606	1-249-405-11	CARBON	100	5%	1/4W F	
R607	1-249-441-11	CARBON	100K	5%	1/4W	
R608	1-249-421-11	CARBON	2.2K	5%	1/4W F	
R610	1-249-418-11	CARBON	1.2K	5%	1/4W F	
R611	1-249-429-11	CARBON	10K	5%	1/4W	
R612	1-249-429-11	CARBON	10K	5%	1/4W	
R613	1-249-429-11	CARBON	10K	5%	1/4W	
R614	1-249-441-11	CARBON	100K	5%	1/4W	
R615	1-247-891-00	CARBON	330K	5%	1/4W	
R616	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R619	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R620	1-249-433-11	CARBON	22K	5%	1/4W	
R640	1-249-433-11	CARBON	22K	5%	1/4W	(H51M:US, CND)
R641	1-249-433-11	CARBON	22K	5%	1/4W	(H51M:US, CND)
R651	1-249-419-11	CARBON	1.5K	5%	1/4W F	
R652	1-249-441-11	CARBON	100K	5%	1/4W	
R653	1-249-441-11	CARBON	100K	5%	1/4W	
R654	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R655	1-249-413-11	CARBON	470	5%	1/4W F	

DISPLAY | POWER | SW

Ref. No.	Part No.	Description				Remarks
R656	1-249-405-11	CARBON	100	5%	1/4W	F
R657	1-247-891-00	CARBON	330K	5%	1/4W	
R658	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R660	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R801	1-249-417-11	CARBON	1K	5%	1/4W	F
R802	1-249-438-11	CARBON	56K	5%	1/4W	
R803	1-249-413-11	CARBON	470	5%	1/4W	F
R804	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R805	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R806	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R807	1-249-421-11	CARBON	2.2K	5%	1/4W	F
⚠R808	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R809	1-249-389-11	CARBON	4.7	5%	1/4W	F
R821	1-249-429-11	CARBON	10K	5%	1/4W	
R822	1-249-437-11	CARBON	47K	5%	1/4W	
R823	1-247-883-00	CARBON	150K	5%	1/4W	
R825	1-249-429-11	CARBON	10K	5%	1/4W	
R826	1-249-417-11	CARBON	1K	5%	1/4W	F
R827	1-249-417-11	CARBON	1K	5%	1/4W	F
R851	1-249-417-11	CARBON	1K	5%	1/4W	F
R852	1-249-438-11	CARBON	56K	5%	1/4W	
R853	1-249-413-11	CARBON	470	5%	1/4W	F
R854	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R855	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R856	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R857	1-249-421-11	CARBON	2.2K	5%	1/4W	F
⚠R858	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R859	1-249-389-11	CARBON	4.7	5%	1/4W	F
R901	1-249-389-11	CARBON	4.7	5%	1/4W	F
R902	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R904	1-212-974-00	FUSIBLE	47	5%	1/2W	F
R905	1-247-903-00	CARBON	1M	5%	1/4W	
R906	1-249-405-11	CARBON	100	5%	1/4W	F
R907	1-249-432-11	CARBON	18K	5%	1/4W	
R908	1-249-432-11	CARBON	18K	5%	1/4W	
R909	1-247-842-11	CARBON	3K	5%	1/4W	
R910	1-249-429-11	CARBON	10K	5%	1/4W	
⚠R951	1-212-934-00	FUSIBLE	1	5%	1/2W	F
R952	1-249-417-11	CARBON	1K	5%	1/4W	F
R953	1-249-423-11	CARBON	3.3K	5%	1/4W	F
⚠R954	1-219-134-11	FUSIBLE	0.1	10%	1/4W	
⚠R955	1-219-134-11	FUSIBLE	0.1	10%	1/4W	
R999	1-202-725-00	SOLID	3.3M	10%	1/2W	(H51M:US, CND)

< CONPOSITION CIRCUIT BLOCK >

RB501	1-239-585-11	COMPOSITION CIRCUIT BLOCK 47KX12

Ref. No.	Part No.	Description	Remarks

< VARIABLE RESISTOR >

RV601	1-223-296-11	RES, VAR, SLIDE 250K/250K (12KHz)
RV602	1-223-296-11	RES, VAR, SLIDE 250K/250K (4KHz)
RV603	1-223-296-11	RES, VAR, SLIDE 250K/250K (1KHz)
RV604	1-223-296-11	RES, VAR, SLIDE 250K/250K (400Hz)
RV605	1-223-296-11	RES, VAR, SLIDE 250K/250K (100Hz)

< SWITCH >

S371	1-572-347-21	SWITCH, SLIDE (DOLBY NR)
S381	1-572-198-11	SWITCH, KEY BOARD (■)
S382	1-572-198-11	SWITCH, KEY BOARD (▶)
S383	1-572-198-11	SWITCH, KEY BOARD (◀◀)
S384	1-572-198-11	SWITCH, KEY BOARD (▶▶)
S385	1-572-198-11	SWITCH, KEY BOARD (● REC)
S386	1-572-198-11	SWITCH, KEY BOARD (HIGH SPEED DUBBING)
S387	1-572-198-11	SWITCH, KEY BOARD (■)
S388	1-572-198-11	SWITCH, KEY BOARD (❚❚ PAUSE)
S389	1-572-198-11	SWITCH, KEY BOARD (▶)
S390	1-572-198-11	SWITCH, KEY BOARD (◀◀)
S391	1-572-198-11	SWITCH, KEY BOARD (▶▶)
S501	1-572-198-11	SWITCH, KEY BOARD (POWER)
S502	1-572-198-11	SWITCH, KEY BOARD (TIMER SET)
S503	1-572-198-11	SWITCH, KEY BOARD (TAPE)
S504	1-572-198-11	SWITCH, KEY BOARD (CD)
S505	1-572-198-11	SWITCH, KEY BOARD (TUNER)
S506	1-572-198-11	SWITCH, KEY BOARD (VIDEO/AUX)
S507	1-572-198-11	SWITCH, KEY BOARD (S-SUR)
S508	1-572-198-11	SWITCH, KEY BOARD (DBFB)
S509	1-572-198-11	SWITCH, KEY BOARD (MEMORY)
S510	1-572-198-11	SWITCH, KEY BOARD (AUTO)
S511	1-572-198-11	SWITCH, KEY BOARD (MONO)
S512	1-572-198-11	SWITCH, KEY BOARD (+)
S513	1-572-198-11	SWITCH, KEY BOARD (-)
S514	1-572-198-11	SWITCH, KEY BOARD (BAND)
S515	1-572-198-11	SWITCH, KEY BOARD (+)
S516	1-572-198-11	SWITCH, KEY BOARD (-)
S517	1-572-198-11	SWITCH, KEY BOARD (CLOCK DISPLAY)
S518	1-572-198-11	SWITCH, KEY BOARD (TIMER CONT)
S519	1-572-198-11	SWITCH, KEY BOARD (SLEEP)
S571	1-572-198-11	SWITCH, KEY BOARD (■)
S572	1-572-198-11	SWITCH, KEY BOARD (❚❚)
S573	1-572-198-11	SWITCH, KEY BOARD (▶)
S574	1-572-198-11	SWITCH, KEY BOARD (▶▶ ▶▶❙)
S575	1-572-198-11	SWITCH, KEY BOARD (❙◀◀ ◀◀)
S576	1-572-198-11	SWITCH, KEY BOARD (EDIT)
S577	1-572-198-11	SWITCH, KEY BOARD (CLEAR)
S578	1-572-198-11	SWITCH, KEY BOARD (CHECK)
S579	1-572-198-11	SWITCH, KEY BOARD (▲)

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks
S580	1-572-198-11	SWITCH, KEY BOARD (TIME)	
S581	1-572-198-11	SWITCH, KEY BOARD (REPEAT)	
S582	1-572-198-11	SWITCH, KEY BOARD (PROGRAM)	
S583	1-572-198-11	SWITCH, KEY BOARD (SHUFFLE)	
S584	1-572-198-11	SWITCH, KEY BOARD (CONTINUE)	
S585	1-572-198-11	SWITCH, KEY BOARD (CD SYNCHRO)	
		< VIBRATOR >	
X501	1-527-997-21	VIBRATOR, CRYSTAL 32KHz	
X502	1-577-101-11	VIBRATOR, CERAMIC 4.19MHz	
**********			
*	1-644-686-21	LEAF SWITCH BOARD	
		**********	
*	3-381-776-01	HOLDER (LED)	
		< CAPACITOR >	
C1001	1-164-159-11	CERAMIC 0.1uF	50V
		< CONNECTOR >	
* CN1001	1-568-856-11	SOCKET, CONNECTOR 13P	
* CN1002	1-564-517-11	PLUG, CONNECTOR 2P	
		< TRANSISTOR >	
Q1001	8-749-924-12	TRANSISTOR PHOTO INTERRUPTER GP2S09-A	
Q1002	8-749-924-12	TRANSISTOR PHOTO INTERRUPTER GP2S09-A	
		< RESISTOR >	
R1001	1-249-407-11	CARBON 150 5% 1/4W F	
R1002	1-249-407-11	CARBON 150 5% 1/4W F	
		< SWITCH >	
S1001	1-572-202-11	SWITCH, LEAF	
S1002	1-572-125-11	SWITCH, LEAF	
S1003	1-572-125-11	SWITCH, LEAF	
S1004	1-572-125-11	SWITCH, LEAF	
S1005	1-572-202-11	SWITCH, LEAF	
S1007	1-692-193-11	SWITCH, PUSH (1 KEY)	
S1008	1-692-193-11	SWITCH, PUSH (1 KEY)	
**********			
*	1-638-308-11	LOADING BOARD	
		**********	
		< CONNECTOR >	
CN291	1-580-918-11	HOUSING, CONNECTOR 5P	

Ref. No.	Part No.	Description	Remarks
		< SWITCH >	
S291	1-571-924-11	SWITCH, LEAF	
S292	1-571-924-11	SWITCH, LEAF	
**********			
			※1-11 (See page 63.)
*	A-4356-784-A	MAIN BOARD, COMPLETE	
		**********	(H51:AEP/H51M:AEP, UK)
*	A-4356-785-A	MAIN BOARD, COMPLETE (H51:CIS)	
		**********	
*	A-4356-786-A	MAIN BOARD, COMPLETE (H51:G, IT)	
		**********	
*	A-4356-800-A	MAIN BOARD, COMPLETE (H51:EE)	
		**********	
*	A-4356-757-A	MAIN BOARD, COMPLETE (H51:US, CND)	
		**********	
*	1-647-265-11	VR BOARD	
		********	
*	3-309-144-31	HEAT SINK	
*	4-925-530-01	PLATE, GROUND	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
		< CAPACITOR >	
C1	1-162-195-31	CERAMIC 4.7PF 10%	50V (*3)
C2	1-124-907-11	ELECT 10uF 20%	50V
C3	1-161-379-00	CERAMIC 0.01uF 20%	25V
C4	1-162-294-31	CERAMIC 0.001uF 10%	50V
C5	1-164-159-11	CERAMIC 0.1uF	50V
C6	1-164-159-11	CERAMIC 0.1uF	50V (*3)
C7	1-162-196-31	CERAMIC 5.6PF 10%	50V
C8	1-164-159-11	CERAMIC 0.1uF	50V (*3)
C11	1-161-374-11	CERAMIC 0.0015uF 20%	50V (*3)
C12	1-102-120-00	CERAMIC 0.0018uF 10%	50V (*3)
C21	1-162-205-31	CERAMIC 18PF 5%	50V
C22	1-162-205-31	CERAMIC 18PF 5%	50V
C23	1-161-379-00	CERAMIC 0.01uF 20%	25V
C24	1-161-379-00	CERAMIC 0.01uF 20%	25V
C25	1-161-379-00	CERAMIC 0.01uF 20%	25V
C26	1-124-907-11	ELECT 10uF 20%	50V
C27	1-161-379-00	CERAMIC 0.01uF 20%	25V
C28	1-161-379-00	CERAMIC 0.01uF 20%	25V
C29	1-161-379-00	CERAMIC 0.01uF 20%	25V
C30	1-124-907-11	ELECT 10uF 20%	50V
C31	1-124-925-11	ELECT 2.2uF 20%	100V
C32	1-136-153-00	FILM 0.01uF 5%	50V
C33	1-124-463-00	ELECT 0.1uF 20%	50V
C34	1-124-902-00	ELECT 0.47uF 20%	50V (*3)
C35	1-136-157-00	FILM 0.022uF 5%	50V (*3)

MAIN VR

Ref. No.	Part No.	Description			Remarks
C36	1-136-157-00	FILM	0.022uF	5%	50V (*3)
C37	1-162-207-31	CERAMIC	22PF	5%	50V
C38	1-161-379-00	CERAMIC	0.01uF	20%	25V
C51	1-124-907-11	ELECT	10uF	20%	50V
C52	1-161-379-00	CERAMIC	0.01uF	20%	25V
C53	1-162-282-31	CERAMIC	100PF	10%	50V
C54	1-161-379-00	CERAMIC	0.01uF	20%	25V
C57	1-124-925-11	ELECT	2.2uF	20%	100V
C58	1-124-903-11	ELECT	1uF	20%	50V
C59	1-161-379-00	CERAMIC	0.01uF	20%	25V
C60	1-124-903-11	ELECT	1uF	20%	50V
C61	1-136-154-00	FILM	0.012uF	5%	50V (*7)
C61	1-136-155-00	FILM	0.015uF	5%	50V (*6)
C62	1-136-155-00	FILM	0.015uF	5%	50V (*6)
C62	1-136-154-00	FILM	0.012uF	5%	50V (*7)
C63	1-124-903-11	ELECT	1uF	20%	50V
C64	1-124-903-11	ELECT	1uF	20%	50V
C66	1-124-903-11	ELECT	1uF	20%	50V
C67	1-124-903-11	ELECT	1uF	20%	50V
C68	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C69	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C70	1-162-294-31	CERAMIC	0.001uF	10%	50V
C71	1-162-294-31	CERAMIC	0.001uF	10%	50V
C73	1-124-903-11	ELECT	1uF	20%	50V
C74	1-162-293-31	CERAMIC	820PF	10%	50V (*6, *9)
C74		CERAMIC	560PF		(*5, *8)
C75	1-161-377-00	CERAMIC	0.0047uF	30%	16V
C76	1-124-916-11	ELECT	22uF	20%	63V
C77	1-161-379-00	CERAMIC	0.01uF	20%	25V
C78	1-123-382-00	ELECT	3.3uF	20%	100V
C79	1-161-379-00	CERAMIC	0.01uF	20%	25V
C80	1-161-379-00	CERAMIC	0.01uF	20%	25V
C81	1-162-294-31	CERAMIC	0.001uF	10%	50V
C82	1-162-207-31	CERAMIC	22PF	5%	50V (*7)
C92	1-124-907-11	ELECT	10uF	20%	50V
C93	1-161-379-00	CERAMIC	0.01uF	20%	25V
C95	1-161-379-00	CERAMIC	0.01uF	20%	25V
C96	1-124-907-11	ELECT	10uF	20%	50V
C99	1-161-379-00	CERAMIC	0.01uF	20%	25V
C201	1-124-471-00	ELECT	1000uF	20%	6.3V
C202	1-124-903-11	ELECT	1uF	20%	50V
C203	1-124-443-00	ELECT	100uF	20%	10V
C204	1-164-159-11	CERAMIC	0.1uF		50V
C205	1-124-907-11	ELECT	10uF	20%	50V
C207	1-124-477-11	ELECT	47uF	20%	25V
C208	1-162-282-31	CERAMIC	100PF	10%	50V
C321	1-162-290-31	CERAMIC	470PF	10%	50V
C322	1-136-157-00	FILM	0.022uF	5%	50V
C323	1-124-443-00	ELECT	100uF	20%	10V

Ref. No.	Part No.	Description			Remarks
C324	1-124-916-11	ELECT	22uF	20%	63V
C331	1-162-290-31	CERAMIC	470PF	10%	50V
C332	1-124-443-00	ELECT	100uF	20%	10V
C333	1-136-157-00	FILM	0.022uF	5%	50V
C334	1-124-443-00	ELECT	100uF	20%	10V
C335	1-124-916-11	ELECT	22uF	20%	63V
C341	1-130-479-00	MYLAR	0.0047uF	5%	50V
C342	1-124-903-11	ELECT	1uF	20%	50V
C343	1-124-907-11	ELECT	10uF	20%	50V
C344	1-164-159-11	CERAMIC	0.1uF		50V
C345	1-124-907-11	ELECT	10uF	20%	50V
C346	1-124-903-11	ELECT	1uF	20%	50V
C347	1-124-902-00	ELECT	0.47uF	20%	50V
C348	1-124-907-11	ELECT	10uF	20%	50V
C349	1-162-290-31	CERAMIC	470PF	10%	50V
C352	1-162-279-31	CERAMIC	75PF	10%	50V
C353	1-162-288-31	CERAMIC	330PF	10%	50V
C354	1-162-280-31	CERAMIC	82PF	10%	50V
C361	1-136-562-11	FILM	0.0082uF	5%	630V (*3)
C361	1-136-601-11	FILM	0.01uF	5%	630V (*4)
C362	1-130-482-00	MYLAR	0.0082uF	5%	50V
C363	1-136-555-11	FILM	0.0022uF	5%	630V (*3)
C364	1-136-555-11	FILM	0.0022uF	5%	630V (*3)
C365	1-124-925-11	ELECT	2.2uF	20%	100V
C366	1-130-482-00	MYLAR	0.0082uF	5%	50V
C367	1-130-478-00	MYLAR	0.0039uF	5%	50V
C368	1-130-478-00	MYLAR	0.0039uF	5%	50V
C369	1-124-903-11	ELECT	1uF	20%	50V
C370	1-124-907-11	ELECT	10uF	20%	50V
C371	1-164-159-11	CERAMIC	0.1uF		50V
C372	1-164-159-11	CERAMIC	0.1uF		50V
C373	1-124-887-00	ELECT	3300uF	20%	16V
C381	1-124-443-00	ELECT	100uF	20%	10V
C384	1-124-443-00	ELECT	100uF	20%	10V
C385	1-164-159-11	CERAMIC	0.1uF		50V
C386	1-164-159-11	CERAMIC	0.1uF		50V
C421	1-162-290-31	CERAMIC	470PF	10%	50V
C422	1-136-157-00	FILM	0.022uF	5%	50V
C423	1-124-443-00	ELECT	100uF	20%	10V
C424	1-124-916-11	ELECT	22uF	20%	63V
C431	1-162-290-31	CERAMIC	470PF	10%	50V
C432	1-124-443-00	ELECT	100uF	20%	10V
C433	1-136-157-00	FILM	0.022uF	5%	50V
C434	1-124-443-00	ELECT	100uF	20%	10V
C435	1-124-916-11	ELECT	22uF	20%	63V
C441	1-130-479-00	MYLAR	0.0047uF	5%	50V
C442	1-124-903-11	ELECT	1uF	20%	50V

Ref. No.	Part No.	Description			Remarks
C443	1-124-907-11	ELECT	10uF	20%	50V
C444	1-164-159-11	CERAMIC	0.1uF		50V
C445	1-124-907-11	ELECT	10uF	20%	50V
C446	1-124-903-11	ELECT	1uF	20%	50V
C447	1-124-902-00	ELECT	0.47uF	20%	50V
C448	1-124-907-11	ELECT	10uF	20%	50V
C449	1-162-290-31	CERAMIC	470PF	10%	50V
C452	1-162-279-31	CERAMIC	75PF	10%	50V
C453	1-162-288-31	CERAMIC	330PF	10%	50V
C454	1-162-280-31	CERAMIC	82PF	10%	50V
C591	1-164-159-11	CERAMIC	0.1uF		50V
C592	1-124-907-11	ELECT	10uF	20%	50V
C593	1-124-907-11	ELECT	10uF	20%	50V
C594	1-124-907-11	ELECT	10uF	20%	50V
C595	1-124-907-11	ELECT	10uF	20%	50V
C598	1-124-472-11	ELECT	470uF	20%	10V
C701	1-162-282-31	CERAMIC	100PF	10%	50V
C702	1-162-282-31	CERAMIC	100PF	10%	50V
C703	1-162-282-31	CERAMIC	100PF	10%	50V (*7)
C704	1-124-907-11	ELECT	10uF	20%	50V (*7)
C705	1-130-480-00	MYLAR	0.0056uF	5%	50V (*7)
C706	1-130-474-00	MYLAR	0.0018uF	5%	50V (*7)
C707	1-124-903-11	ELECT	1uF	20%	50V
C708	1-161-379-00	CERAMIC	0.01uF	20%	25V (*7)
C709	1-124-907-11	ELECT	10uF	20%	50V (*7)
C716	1-161-379-00	CERAMIC	0.01uF	20%	25V (*6)
C717	1-161-379-00	CERAMIC	0.01uF	20%	25V (*6)
C718	1-124-907-11	ELECT	10uF	20%	50V (*6)
C719	1-124-907-11	ELECT	10uF	20%	50V (*6)
C721	1-162-282-31	CERAMIC	100PF	10%	50V (*6)
C722	1-162-282-31	CERAMIC	100PF	10%	50V (*6)
C723	1-162-282-31	CERAMIC	100PF	10%	50V (*6)
C724	1-162-215-31	CERAMIC	47PF	5%	50V (*6)
C725	1-164-159-11	CERAMIC	0.1uF		50V (*6)
C741	1-124-122-11	ELECT	100uF	20%	50V
C751	1-162-282-31	CERAMIC	100PF	10%	50V
C752	1-162-282-31	CERAMIC	100PF	10%	50V
C753	1-162-282-31	CERAMIC	100PF	10%	50V (*7)
C754	1-124-907-11	ELECT	10uF	20%	50V (*7)
C755	1-130-480-00	MYLAR	0.0056uF	5%	50V (*7)
C756	1-130-474-00	MYLAR	0.0018uF	5%	50V (*7)
C757	1-124-903-11	ELECT	1uF	20%	50V
C758	1-161-379-00	CERAMIC	0.01uF	20%	25V (*7)
C759	1-124-907-11	ELECT	10uF	20%	50V (*7)
C809	1-164-159-11	CERAMIC	0.1uF		50V (*5)
C859	1-164-159-11	CERAMIC	0.1uF		50V (*5)
C955	1-124-903-11	ELECT	1uF	20%	50V
C958	1-126-163-11	ELECT	4.7uF	20%	50V
C959	1-126-163-11	ELECT	4.7uF	20%	50V
C981	1-124-443-00	ELECT	100uF	20%	10V

Ref. No.	Part No.	Description			Remarks
C982	1-161-379-00	CERAMIC	0.01uF	20%	25V
C983	1-124-442-00	ELECT	330uF	20%	6.3V
C984	1-124-443-00	ELECT	100uF	20%	10V
C985	1-124-903-11	ELECT	1uF	20%	50V
C986	1-124-903-11	ELECT	1uF	20%	50V
C987	1-124-585-11	ELECT	3300uF	20%	10V
C1002	1-161-379-00	CERAMIC	0.01uF	20%	25V (*6)
C1003	1-161-379-00	CERAMIC	0.01uF	20%	25V (*6)
C1006	1-164-159-11	CERAMIC	0.1uF		50V
C1007	1-161-379-00	CERAMIC	0.01uF	20%	25V
C1009	1-164-159-11	CERAMIC	0.1uF		50V
C1010	1-161-379-00	CERAMIC	0.01uF	20%	25V (*6)
C5021	1-161-379-00	CERAMIC	0.01uF	20%	25V (*5)
C7001	1-124-478-11	ELECT	100uF	20%	25V (*6)

< CIRCUIT BREAKER >

CB801	1-532-564-00	BREAKER, CIRCUIT	
CB851	1-532-564-00	BREAKER, CIRCUIT	

< FILTER >

CF1	1-527-968-11	FILTER, CERAMIC	
CF2	1-527-968-11	FILTER, CERAMIC	(*5)
CF51	1-527-968-11	FILTER, CERAMIC	

< CONNECTOR >

* CN31	1-564-506-11	PLUG, CONNECTOR 3P	
* CN32	1-564-509-11	PLUG, CONNECTOR 6P	
* CN33	1-564-505-11	PLUG, CONNECTOR 2P	
* CN51	1-568-832-11	SOCKET, CONNECTOR 13P	(*8)
* CN371	1-569-155-11	PLUG, CONNECTOR 10P	
* CN591	1-750-177-11	PIN, CONNECTOR (PC BOARD) 15P	
CN592	1-691-892-21	CONNECTOR, FFC/FPC 13P	
* CN593	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P	
* CN601	1-564-509-11	PLUG, CONNECTOR 6P	
* CN602	1-568-832-11	SOCKET, CONNECTOR 13P	
* CN701	1-569-155-11	PLUG, CONNECTOR 10P	
* CN702	1-573-048-11	PLUG, CONNECTOR 11P	
CN703	1-695-072-21	CONNECTOR, FFC/FPC 13P	
* CN704	1-573-085-11	CONNECTOR, FPC (NON ZIF) 19P	
* TP201	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P	
* TP202	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P	
* TP203	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P	(*7)

< DIODE >

D21	8-719-933-33	DIODE	HZS6A1L
D51	8-719-987-63	DIODE	1N4148M
D52	8-719-987-63	DIODE	1N4148M (*8)
D53	8-719-987-63	DIODE	1N4148M (*8)
D201	8-719-987-63	DIODE	1N4148M

MAIN VR

Ref. No.	Part No.	Description	Remarks
D202	8-719-987-63	DIODE 1N4148M	
D203	8-719-000-54	DIODE UZL-6L3	
D204	8-719-987-63	DIODE 1N4148M	
D205	8-719-987-63	DIODE 1N4148M	
D351	8-719-987-63	DIODE 1N4148M	
D591	8-719-987-63	DIODE 1N4148M	
D592	8-719-987-63	DIODE 1N4148M	
D981	8-719-933-48	DIODE HZS7B3L	
		< FRONTEND >	
FE1	1-465-673-11	FRONT END (2 BAND) (*10)	
FE1	1-693-217-11	FRONT END (4 GANG) (*5)	
FE1	1-465-396-11	FRONT END (3 GANG) (EXCEPT *5, *10)	
FE2	1-239-261-12	ENCAPSULATED COMPONENT (*3)	
FE2	1-239-260-11	ENCAPSULATED COMPONENT (*4)	
FE3	1-236-463-11	ENCAPSULATED COMPONENT (*3)	
		< IC >	
IC21	8-759-820-91	IC LC7218	
IC51	8-759-090-40	IC LA1831	
IC201	8-759-093-00	IC M37471M2-128SP	
IC202	8-759-240-69	IC TC4069UBP	
IC321	8-759-111-44	IC uPC4570C-1	
IC331	8-759-111-44	IC uPC4570C-1	
IC341	8-759-098-75	IC HA12171NT	
IC371	8-759-822-09	IC LB1641	
IC591	8-759-820-62	IC LB1639	
IC701	8-759-634-50	IC M5218AL (*7)	
IC702	8-759-634-50	IC M5218AL (*6)	
IC703	8-759-000-48	IC MC14052BCP	
IC981	8-759-821-93	IC LA5601	
		< IFT >	
IFT51	1-404-713-11	TRANSFORMER, IF	
		< JACK >	
J701	1-750-178-21	JACK, PIN 2P (VIDEO/AUX)	
J702	1-750-032-11	JACK (DIA. 3.5) (MIX MIC)	
J951	1-750-032-11	JACK (DIA. 3.5) (HEADPHONES)	
		< COIL >	
L1	1-408-425-00	INDUCTOR 220uH (*3)	
L21	1-410-482-31	INDUCTOR 100uH	
L51	1-408-399-00	INDUCTOR 1.5uH	
L351	1-410-780-11	INDUCTOR 27mH	
L361	1-410-482-31	INDUCTOR 100uH	
L451	1-410-780-11	INDUCTOR 27mH	
L981	1-410-482-31	INDUCTOR 100uH	

Ref. No.	Part No.	Description	Remarks
		< FILTER >	
LPF51	1-235-164-00	FILTER, LOW PASS	
LPF52	1-235-164-00	FILTER, LOW PASS	
		< TRANSISTOR >	
Q1	8-729-620-19	TRANSISTOR 2SC2724-CD	
Q2	8-729-620-19	TRANSISTOR 2SC2724-CD	(*5)
Q3	8-729-900-61	TRANSISTOR DTA114ES	
Q4	8-729-119-76	TRANSISTOR 2SA1175-HFE	(*3)
Q5	8-729-119-76	TRANSISTOR 2SA1175-HFE	(*3)
Q6	8-729-900-80	TRANSISTOR DTC114ES	(*3)
Q7	8-729-900-80	TRANSISTOR DTC114ES	(*3)
Q8	8-729-900-80	TRANSISTOR DTC114ES	(*3)
Q9	8-729-119-78	TRANSISTOR 2SC2785-HFE	(*3)
Q21	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q22	8-729-201-84	TRANSISTOR 2SC3112-B	
Q23	8-729-202-67	TRANSISTOR 2SK246-GR3	(*3)
Q24	8-729-201-84	TRANSISTOR 2SC3112-B	(*3)
Q51	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q52	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q201	8-729-900-80	TRANSISTOR DTC114ES	
Q202	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q203	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q204	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q205	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q208	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q209	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q210	8-729-140-98	TRANSISTOR 2SD773	
Q341	8-729-900-74	TRANSISTOR DTC143TS	
Q361	8-729-801-84	TRANSISTOR 2SB1013-4	
Q362	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q363	8-729-194-57	TRANSISTOR 2SC945-P	
Q364	8-729-194-57	TRANSISTOR 2SC945-P	
Q365	8-729-900-61	TRANSISTOR DTA114ES	
Q371	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q372	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q373	8-729-900-65	TRANSISTOR DTA144ES	
Q374	8-729-900-89	TRANSISTOR DTC144ES	
Q375	8-729-801-93	TRANSISTOR 2SD1387	
Q376	8-729-900-61	TRANSISTOR DTA114ES	
Q441	8-729-900-74	TRANSISTOR DTC143TS	
Q981	8-729-209-15	TRANSISTOR 2SD2012	
		< RESISTOR >	
R1	1-249-411-11	CARBON 330 5% 1/4W	
R2	1-249-411-11	CARBON 330 5% 1/4W	
R3	1-247-891-00	CARBON 330K 5% 1/4W	
R4	1-249-411-11	CARBON 330 5% 1/4W	
R5	1-247-891-00	CARBON 330K 5% 1/4W	(*5)

MAIN | **VR**

Ref. No.	Part No.	Description				Remarks
R6	1-249-411-11	CARBON	330	5%	1/4W	(*5)
R7	1-249-406-11	CARBON	120	5%	1/4W F	
R8	1-249-429-11	CARBON	10K	5%	1/4W	(*3)
R9	1-249-429-11	CARBON	10K	5%	1/4W	(*9)
R10	1-249-437-11	CARBON	47K	5%	1/4W	
R11	1-249-429-11	CARBON	10K	5%	1/4W	
R12	1-249-425-11	CARBON	4.7K	5%	1/4W F	(*3)
R13	1-249-437-11	CARBON	47K	5%	1/4W	(*3)
R14	1-249-429-11	CARBON	10K	5%	1/4W	(*3)
R15	1-249-429-11	CARBON	10K	5%	1/4W	(*3)
R17	1-247-903-00	CARBON	1M	5%	1/4W	(*3)
R18	1-249-429-11	CARBON	10K	5%	1/4W	(*3)
R19	1-249-429-11	CARBON	10K	5%	1/4W	(*3)
R21	1-249-417-11	CARBON	1K	5%	1/4W F	
R22	1-249-417-11	CARBON	1K	5%	1/4W F	
R23	1-249-417-11	CARBON	1K	5%	1/4W F	
R24	1-249-405-11	CARBON	100	5%	1/4W F	
R25	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R26	1-249-417-11	CARBON	1K	5%	1/4W F	
R27	1-249-405-11	CARBON	100	5%	1/4W F	
R28	1-249-405-11	CARBON	100	5%	1/4W F	
R30	1-249-423-11	CARBON	3.3K	5%	1/4W F	
R31	1-249-414-11	CARBON	560	5%	1/4W F	
R32	1-249-417-11	CARBON	1K	5%	1/4W F	
R33	1-249-410-11	CARBON	270	5%	1/4W F	
R34	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R35	1-249-421-11	CARBON	2.2K	5%	1/4W F	
R36	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R37	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R38	1-249-405-11	CARBON	100	5%	1/4W F	
R39	1-249-423-11	CARBON	3.3K	5%	1/4W F	(*3)
R40	1-249-414-11	CARBON	560	5%	1/4W F	(*3)
R41	1-249-417-11	CARBON	1K	5%	1/4W F	(*3)
R42	1-249-410-11	CARBON	270	5%	1/4W F	(*3)
R43	1-249-433-11	CARBON	22K	5%	1/4W	(*3)
R44	1-249-421-11	CARBON	2.2K	5%	1/4W F	(*3)
R45	1-249-425-11	CARBON	4.7K	5%	1/4W F	(*3)
R46	1-249-425-11	CARBON	4.7K	5%	1/4W F	(*3)
R47	1-249-417-11	CARBON	1K	5%	1/4W F	(*3)
R52	1-249-429-11	CARBON	10K	5%	1/4W	
R53	1-249-412-11	CARBON	390	5%	1/4W F	
R54	1-247-870-11	CARBON	43K	5%	1/4W	
R55	1-249-429-11	CARBON	10K	5%	1/4W	
R56	1-247-842-11	CARBON	3K	5%	1/4W	
R57	1-249-421-11	CARBON	2.2K	5%	1/4W F	
R58	1-249-437-11	CARBON	47K	5%	1/4W	
R59	1-249-417-11	CARBON	1K	5%	1/4W F	
R61	1-247-891-00	CARBON	330K	5%	1/4W	
R62	1-247-891-00	CARBON	330K	5%	1/4W	
R63	1-249-421-11	CARBON	2.2K	5%	1/4W F	

Ref. No.	Part No.	Description				Remarks
R64	1-249-421-11	CARBON	2.2K	5%	1/4W F	
R65	1-249-429-11	CARBON	10K	5%	1/4W	
R66	1-249-429-11	CARBON	10K	5%	1/4W	
R69	1-249-399-11	CARBON	33	5%	1/4W F	
R70	1-249-417-11	CARBON	1K	5%	1/4W F	(*7)
R91	1-249-401-11	CARBON	47	5%	1/4W F	
R92	1-249-405-11	CARBON	100	5%	1/4W F	
R202	1-247-848-11	CARBON	5.1K	5%	1/4W	
R203	1-247-848-11	CARBON	5.1K	5%	1/4W	
R204	1-249-429-11	CARBON	10K	5%	1/4W	
R205	1-249-429-11	CARBON	10K	5%	1/4W	
R206	1-249-429-11	CARBON	10K	5%	1/4W	
R207	1-249-429-11	CARBON	10K	5%	1/4W	
R208	1-249-429-11	CARBON	10K	5%	1/4W	
R209	1-249-429-11	CARBON	10K	5%	1/4W	
R210	1-249-429-11	CARBON	10K	5%	1/4W	
R211	1-249-429-11	CARBON	10K	5%	1/4W	
R212	1-249-417-11	CARBON	1K	5%	1/4W F	
R213	1-249-417-11	CARBON	1K	5%	1/4W F	
R214	1-249-417-11	CARBON	1K	5%	1/4W F	
R215	1-249-417-11	CARBON	1K	5%	1/4W F	
R216	1-249-417-11	CARBON	1K	5%	1/4W F	
R217	1-249-429-11	CARBON	10K	5%	1/4W	
R218	1-249-429-11	CARBON	10K	5%	1/4W	
R219	1-249-429-11	CARBON	10K	5%	1/4W	
R220	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R221	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R222	1-249-429-11	CARBON	10K	5%	1/4W	
R223	1-249-429-11	CARBON	10K	5%	1/4W	
R224	1-249-429-11	CARBON	10K	5%	1/4W	
R225	1-249-429-11	CARBON	10K	5%	1/4W	
R226	1-249-417-11	CARBON	1K	5%	1/4W F	
R227	1-249-417-11	CARBON	1K	5%	1/4W F	
R228	1-249-425-11	CARBON	4.7K	5%	1/4W F	
R229	1-249-437-11	CARBON	47K	5%	1/4W	
R230	1-249-437-11	CARBON	47K	5%	1/4W	
R231	1-247-903-00	CARBON	1M	5%	1/4W	
R232	1-249-411-11	CARBON	330	5%	1/4W	
R233	1-249-411-11	CARBON	330	5%	1/4W	
R234	1-249-409-11	CARBON	220	5%	1/4W F	
R235	1-249-409-11	CARBON	220	5%	1/4W F	
R236	1-249-410-11	CARBON	270	5%	1/4W F	
R237	1-249-429-11	CARBON	10K	5%	1/4W	
R238	1-249-433-11	CARBON	22K	5%	1/4W	
R239	1-249-429-11	CARBON	10K	5%	1/4W	
R240	1-249-428-11	CARBON	8.2K	5%	1/4W F	
R241	1-247-836-11	CARBON	1.6K	5%	1/4W	
R242	1-249-409-11	CARBON	220	5%	1/4W F	
R321	1-247-889-00	CARBON	270K	5%	1/4W	
R322	1-249-405-11	CARBON	100	5%	1/4W F	

MAIN VR

Ref. No.	Part No.	Description					Remarks
R323	1-247-882-11	CARBON	130K	5%	1/4W		
R324	1-249-426-11	CARBON	5.6K	5%	1/4W		
R325	1-249-409-11	CARBON	220	5%	1/4W	F	
R331	1-247-889-00	CARBON	270K	5%	1/4W		
R332	1-249-433-11	CARBON	22K	5%	1/4W		
R333	1-249-405-11	CARBON	100	5%	1/4W	F	
R334	1-247-882-11	CARBON	130K	5%	1/4W		
R335	1-249-426-11	CARBON	5.6K	5%	1/4W		
R336	1-249-409-11	CARBON	220	5%	1/4W	F	
R341	1-249-430-11	CARBON	12K	5%	1/4W		
R342	1-249-431-11	CARBON	15K	5%	1/4W		
R343	1-249-425-11	CARBON	4.7K	5%	1/4W	F	
R344	1-249-425-11	CARBON	4.7K	5%	1/4W	F	
R345	1-249-429-11	CARBON	10K	5%	1/4W		
R346	1-249-433-11	CARBON	22K	5%	1/4W	F	(*11)
R346	1-249-425-11	CARBON	4.7K	5%	1/4W		(*10)
R347	1-249-437-11	CARBON	47K	5%	1/4W		
R351	1-249-430-11	CARBON	12K	5%	1/4W		
⚠R361	1-212-857-00	FUSIBLE	10	5%	1/4W	F	
R363	1-249-434-11	CARBON	27K	5%	1/4W		
R364	1-249-434-11	CARBON	27K	5%	1/4W		
R365	1-247-872-11	CARBON	51K	5%	1/4W		(*3)
R366	1-247-880-11	CARBON	110K	5%	1/4W		(*3)
R367	1-247-856-00	CARBON	11K	5%	1/4W		(*3)
R367	1-249-428-11	CARBON	8.2K	5%	1/4W	F	(*4)
R371	1-249-428-11	CARBON	8.2K	5%	1/4W	F	
R372	1-249-425-11	CARBON	4.7K	5%	1/4W	F	
R373	1-249-410-11	CARBON	270	5%	1/4W	F	
R374	1-249-417-11	CARBON	1K	5%	1/4W	F	
R376	1-249-414-11	CARBON	560	5%	1/4W	F	
R377	1-249-425-11	CARBON	4.7K	5%	1/4W	F	
R381	1-247-876-11	CARBON	75K	5%	1/4W		
R382	1-249-432-11	CARBON	18K	5%	1/4W		
R386	1-249-432-11	CARBON	18K	5%	1/4W		
R387	1-249-429-11	CARBON	10K	5%	1/4W		
R388	1-249-429-11	CARBON	10K	5%	1/4W		
R389	1-249-429-11	CARBON	10K	5%	1/4W		
R390	1-249-429-11	CARBON	10K	5%	1/4W		
R392	1-249-429-11	CARBON	10K	5%	1/4W		
R393	1-249-429-11	CARBON	10K	5%	1/4W		
R394	1-249-429-11	CARBON	10K	5%	1/4W		
R395	1-249-429-11	CARBON	10K	5%	1/4W		
R396	1-247-864-11	CARBON	24K	5%	1/4W		
R421	1-247-889-00	CARBON	270K	5%	1/4W		
R422	1-249-405-11	CARBON	100	5%	1/4W	F	
R423	1-247-882-11	CARBON	130K	5%	1/4W		
R424	1-249-426-11	CARBON	5.6K	5%	1/4W		
R425	1-249-409-11	CARBON	220	5%	1/4W	F	
R431	1-247-889-00	CARBON	270K	5%	1/4W		
R432	1-249-433-11	CARBON	22K	5%	1/4W		
R433	1-249-405-11	CARBON	100	5%	1/4W	F	
R434	1-247-882-11	CARBON	130K	5%	1/4W		
R435	1-249-426-11	CARBON	5.6K	5%	1/4W		
R436	1-249-409-11	CARBON	220	5%	1/4W	F	
R441	1-249-430-11	CARBON	12K	5%	1/4W		
R442	1-249-431-11	CARBON	15K	5%	1/4W		
R443	1-249-425-11	CARBON	4.7K	5%	1/4W	F	
R444	1-249-425-11	CARBON	4.7K	5%	1/4W	F	
R445	1-249-429-11	CARBON	10K	5%	1/4W		
R446	1-249-433-11	CARBON	22K	5%	1/4W	F	(*11)
R446	1-249-425-11	CARBON	4.7K	5%	1/4W		(*10)
R447	1-249-437-11	CARBON	47K	5%	1/4W		
R451	1-249-430-11	CARBON	12K	5%	1/4W		
R591	1-249-437-11	CARBON	47K	5%	1/4W		
R592	1-249-437-11	CARBON	47K	5%	1/4W		
R593	1-249-417-11	CARBON	1K	5%	1/4W	F	
R594	1-249-417-11	CARBON	1K	5%	1/4W	F	
R701	1-249-417-11	CARBON	1K	5%	1/4W	F	
R702	1-249-437-11	CARBON	47K	5%	1/4W		
R703	1-249-417-11	CARBON	1K	5%	1/4W	F	(*7)
R704	1-247-897-11	CARBON	560K	5%	1/4W		(*7)
R705	1-249-437-11	CARBON	47K	5%	1/4W		(*7)
R706	1-249-425-11	CARBON	4.7K	5%	1/4W	F	
R707	1-249-437-11	CARBON	47K	5%	1/4W		
R721	1-249-429-11	CARBON	10K	5%	1/4W		(*6)
R722	1-249-411-11	CARBON	330	5%	1/4W		(*6)
R723	1-249-408-11	CARBON	180	5%	1/4W	F	(*6)
R724	1-249-441-11	CARBON	100K	5%	1/4W		(*6)
R725	1-249-441-11	CARBON	100K	5%	1/4W		(*6)
R741	1-249-425-11	CARBON	4.7K	5%	1/4W	F	
R742	1-249-429-11	CARBON	10K	5%	1/4W		(*11)
R742	1-249-417-11	CARBON	1K	5%	1/4W	F	(*10)
R743	1-249-437-11	CARBON	47K	5%	1/4W		
R744	1-249-417-11	CARBON	1K	5%	1/4W	F	
R745	1-249-425-11	CARBON	4.7K	5%	1/4W	F	(*11)
R745	1-249-405-11	CARBON	100	5%	1/4W	F	(*10)
R746	1-249-429-11	CARBON	10K	5%	1/4W		
R747	1-249-429-11	CARBON	10K	5%	1/4W		
R748	1-249-429-11	CARBON	10K	5%	1/4W		
R751	1-249-417-11	CARBON	1K	5%	1/4W	F	
R752	1-249-437-11	CARBON	47K	5%	1/4W		
R753	1-249-417-11	CARBON	1K	5%	1/4W	F	(*7)
R754	1-247-897-11	CARBON	560K	5%	1/4W		(*7)
R755	1-249-437-11	CARBON	47K	5%	1/4W		(*7)
R756	1-249-425-11	CARBON	4.7K	5%	1/4W	F	
R757	1-249-437-11	CARBON	47K	5%	1/4W		
R791	1-249-425-11	CARBON	4.7K	5%	1/4W	F	
R792	1-249-429-11	CARBON	10K	5%	1/4W		(*11)
R792	1-249-405-11	CARBON	100	5%	1/4W	F	(*10)
R793	1-249-437-11	CARBON	47K	5%	1/4W		

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description				Remarks
R794	1-249-417-11	CARBON	1K	5%	1/4W	F
R795	1-249-425-11	CARBON	4.7K	5%	1/4W	F (*11)
R795	1-249-405-11	CARBON	100	5%	1/4W	F (*10)
R810	1-249-414-11	CARBON	560	5%	1/4W	F
R811	1-249-389-11	CARBON	4.7	5%	1/4W	F (*5)
R860	1-249-414-11	CARBON	560	5%	1/4W	F
R861	1-249-389-11	CARBON	4.7	5%	1/4W	F (*5)
R981	1-249-411-11	CARBON	330	5%	1/4W	
R982	1-249-393-11	CARBON	10	5%	1/4W	F
		< VARIABLE RESISTOR >				
RV51	1-241-630-11	RES, ADJ, CARBON 10K				
RV321	1-241-627-11	RES, ADJ, CARBON 1K				
RV331	1-241-627-11	RES, ADJ, CARBON 1K				
RV341	1-241-630-11	RES, ADJ, CARBON 10K				
RV351	1-238-020-11	RES, ADJ, CARBON 100K				
RV371	1-241-630-11	RES, ADJ, CARBON 10K				
RV372	1-241-629-11	RES, ADJ, CARBON 4.7K				
RV421	1-241-627-11	RES, ADJ, CARBON 1K				
RV431	1-241-627-11	RES, ADJ, CARBON 1K				
RV441	1-241-630-11	RES, ADJ, CARBON 10K				
RV451	1-238-020-11	RES, ADJ, CARBON 100K				
RV591	1-223-308-11	RES, VAR, CARBON 100K/100K (VOLUME)				
		< RELAY >				
RY351	1-515-614-11	RELAY				
		< SWITCH >				
S361	1-572-185-11	SWITCH, SLIDE (ISS) (*3)				
		< TRANSFORMER >				
T361	1-433-349-11	TRANSFORMER, BIAS OSCILLATION				
T501	1-236-465-11	ENCAPSULATED COMPONENT (*5)				
		< TERMINAL >				
TB101	1-537-489-11	TERMINAL BOARD (ANTENNA) (*7)				
TB101	1-537-238-21	TERMINAL BOARD (ANTENNA) (*6)				
TB801	1-537-238-11	TERMINAL BOARD (ANTENNA) (SPEAKER)				
		< VIBRATOR >				
X21	1-579-585-11	VIBRATOR, CRYSTAL 7.2MHz				
X51	1-579-777-11	DISCRIMINATOR, CERAMIC				
X52	1-577-075-11	OSCILLATOR, CERAMIC 19kHz				
X201	1-577-358-21	VIBRATOR, CERAMIC 4MHz				

****

Ref. No.	Part No.	Description				Remarks
*	A-4347-500-A	POLAR BOARD, COMPLETE (*8)				
		**********				
		(H51:CIS MODEL ONLY)				
		< CAPACITOR >				
C1701	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1702	1-104-294-11	POLYSTYRENE	470PF	5%	50V	
C1703	1-124-902-00	ELECT	0.47uF	20%	50V	
C1704	1-124-902-00	ELECT	0.47uF	20%	50V	
C1705	1-164-098-11	CERAMIC	0.047uF		12V	
C1706	1-124-903-11	ELECT	1uF	20%	50V	
C1707	1-162-288-31	CERAMIC	330PF	10%	50V	
C1708	1-124-903-11	ELECT	1uF	20%	50V	
C1709	1-124-903-11	ELECT	1uF	20%	50V	
C1710	1-130-471-00	MYLAR	0.001uF	5%	50V	
C1710	1-137-364-91	FILM	0.001uF	5%	50V	
C1711	1-130-471-00	MYLAR	0.001uF	5%	50V	
C1711	1-137-364-91	FILM	0.001uF	5%	50V	
C1712	1-130-736-11	FILM	0.01uF	5%	50V	
C1713	1-130-736-11	FILM	0.01uF	5%	50V	
C1714	1-124-903-11	ELECT	1uF	20%	50V	
C1715	1-124-903-11	ELECT	1uF	20%	50V	
C1716	1-124-903-11	ELECT	1uF	20%	50V	
C1717	1-162-291-31	CERAMIC	560PF	10%	50V	
C1718	1-162-291-31	CERAMIC	560PF	10%	50V	
C1719	1-124-477-11	ELECT	47uF	20%	25V	
C1720	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1721	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1722	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1723	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1724	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C1725	1-124-477-11	ELECT	47uF	20%	25V	
C1726	1-124-903-11	ELECT	1uF	20%	50V	
C1727	1-124-903-11	ELECT	1uF	20%	50V	
C1728	1-124-034-51	ELECT	33uF	20%	16V	
C1729	1-124-907-11	ELECT	10uF	20%	50V	
		< CONNECTOR >				
* CN1701	1-568-832-11	SOCKET, CONNECTOR 13P				
		< DIODE >				
D1701	8-719-987-63	DIODE 1N4148M				
D1702	8-719-987-63	DIODE 1N4148M				
D1703	8-719-987-63	DIODE 1N4148M				
D1704	8-719-987-63	DIODE 1N4148M				
D1705	8-719-987-63	DIODE 1N4148M				

POLAR

Ref. No.	Part No.	Description	Remarks
		< IC >	
IC1701	8-759-063-04	IC IR3R42	
IC1702	8-759-634-51	IC M5218AP	
IC1703	8-759-140-53	IC MC14053BCP	
		< COIL >	
L1701	1-409-497-11	COIL (FILTER)	
		< TRANSISTOR >	
Q1701	8-729-900-61	TRANSISTOR DTA114ES	
Q1702	8-729-900-80	TRANSISTOR DTC114ES	
Q1703	8-729-900-80	TRANSISTOR DTC114ES	
Q1704	8-729-900-80	TRANSISTOR DTC114ES	
Q1705	8-729-900-61	TRANSISTOR DTA114ES	
		< RESISTOR >	
R1701	1-249-432-11	CARBON 18K 5% 1/4W	
R1702	1-249-435-11	CARBON 33K 5% 1/4W	
R1703	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R1704	1-247-858-11	CARBON 13K 5% 1/4W	
R1705	1-249-417-11	CARBON 1K 5% 1/4W	F
R1706	1-249-417-11	CARBON 1K 5% 1/4W	F
R1707	1-249-441-11	CARBON 100K 5% 1/4W	
R1708	1-249-440-11	CARBON 82K 5% 1/4W	
R1709	1-249-439-11	CARBON 68K 5% 1/4W	
R1710	1-249-439-11	CARBON 68K 5% 1/4W	
R1711	1-249-439-11	CARBON 68K 5% 1/4W	
R1712	1-247-878-00	CARBON 91K 5% 1/4W	
R1713	1-247-878-00	CARBON 91K 5% 1/4W	
R1714	1-249-441-11	CARBON 100K 5% 1/4W	
R1715	1-249-441-11	CARBON 100K 5% 1/4W	
R1716	1-249-441-11	CARBON 100K 5% 1/4W	
R1717	1-249-441-11	CARBON 100K 5% 1/4W	
R1718	1-249-429-11	CARBON 10K 5% 1/4W	
R1719	1-249-429-11	CARBON 10K 5% 1/4W	
R1720	1-249-429-11	CARBON 10K 5% 1/4W	
R1721	1-249-434-11	CARBON 27K 5% 1/4W	
R1722	1-249-441-11	CARBON 100K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV1701	1-238-601-11	RES, ADJ, CARBON 22K	
RV1702	1-238-599-11	RES, ADJ, CARBON 4.7K	
		< SWITCH >	
S1701	1-571-303-11	SWITCH, SLIDE	

Ref. No.	Part No.	Description	Remarks
		< TEST PIN >	
* TP1701	1-560-061-00	PIN, CONNECTOR 3P	
* TP1702	1-560-061-00	PIN, CONNECTOR 3P	
		**********	
		MISCELLANEOUS	
		**********	
11	1-690-970-31	WIRE (FLAT TYPE) (13 CORE)	
56	1-751-027-41	WIRE (FLAT TYPE) (19 CORE)	
57	1-751-042-31	WIRE (FLAT TYPE) (13 CORE)	
⚠63	1-558-945-21	CORD, POWER (POLAR. SPT-1) (H51M:US, CND)	
⚠63	1-575-651-81	CORD, POWER (H51/H51M:AEP)	
⚠63	1-696-586-11	CORD, POWER (H51M:UK)	
67	1-751-034-11	WIRE (FLAT TYPE) (7 CORE)	
70	1-690-589-31	WIRE, FLAT TYPE (13 CORE) (H51:CIS)	
308	1-751-027-41	WIRE (FLAT TYPE) (19 CORE)	
313	1-751-109-11	WIRE (FLAT TYPE) (5 CORE)	
⚠355	8-848-144-11	DEVICE, OPTICAL KSS-240A	
356	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
ANT1	1-501-321-51	ANTENNA, TELESCOPIC (H51)	
⚠F901	1-532-215-00	FUSE (H51/H51M:AEP, UK)	
⚠F902	1-576-103-11	FUSE (H51M:US, CND)	
HE901	1-543-673-11	HEAD, MAGNETIC (ERASE)	
HP901	1-543-940-11	HEAD, MAGNETIC (PLAYBACK)	
HRP901	1-543-319-11	HEAD, MAGNETIC (REC/PB)	
M251	A-4660-307-A	MOTOR (L) ASSY	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M901	X-3362-377-1	MOTOR (WH) ASSY	
M902	A-2004-188-A	MOTOR ASSY, DC	
⚠P901	1-423-469-11	TRANSFORMER, POWER (H51/H51M:AEP, UK)	
⚠P901	1-423-470-11	TRANSFORMER, POWER (H51M:US, CND)	
S101	1-572-085-11	SWITCH, LEAF	
		**********	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks
		ACCESSORIES & PACKING MATERIALS	
		********	
	1-466-940-11	COMMANDER, STANDARD (RM-S51)	
	1-501-374-11	ANTENNA, LOOP (H51M:UK)	
	1-501-594-11	ANTENNA (FM) (H51M:UK)	
	1-501-594-21	ANTENNA (FM) (H51:G, IT)	
	1-690-727-11	CORD (SPEAKER) (H51M:UK)	
	2-181-754-01	COVER (MLY), BATTERY	
	3-756-669-21	MANUAL, INSTRUCTION (ENGLISH) (H51M:UK)	
	4-956-291-01	LABEL, MODEL NUMBER (H51:IT)	
*	4-957-593-01	INDIVIDUAL CARTON (H51M:UK)	
*	4-958-213-01	CUSHION (LOWER)	
*	4-958-214-01	CUSHION (UPPER)	

※1 : H51:AEP, EE, G, IT/H51M
※2 : H51:AEP, EE, CIS/H51M
※3 : H51:AEP, EE, CIS/H51M:AEP, UK
※4 : H51:G, IT/H51M:US, CND
※5 : H51:G, IT
※6 : H51M:US, CND
※7 : H51/H51M:AEP, UK
※8 : H51:CIS
※9 : H51:AEP, EE/H51M:AEP, UK
※10 : H51:AEP/H51M:AEP, UK
※11 : H51:EE, G, IT, CIS/H51M:US, CND

NOTE:
CND : Canadian model
AEP : AEP, AED model
IT : Italian model
G : German model
EE : East European model

****

HARDWARE LIST

****

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 SLIT
#2	7-685-871-01	SCREW +BVTT 3X6 (S)
#3	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3
#4	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#5	7-621-255-15	SCREW +P 2X3
#6	7-685-649-79	SCREW +BVTP 3X14 TYPE2 N-S (H51)
#7	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S
#8	7-624-105-04	STOP RING 2.3, TYPE -E
#9	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT
#10	7-623-921-01	RING, RETAINING, CAPSTAN
#11	7-621-255-25	SCREW +BVTT 2X4 (S)
#12	7-621-770-XX	SCREW +BVTT 2.6X8 (S)
#13	7-621-770-67	SCREW +BVTT 2.6X6 (S)
#14	7-621-775-10	SCREW +B 2.6X4
#15	7-621-775-00	SCREW +B 2.6X3
#16	7-621-772-48	SCREW +B 2X8

FH-B510/MHC-510

696

SERVICE MANUAL

US Model
Canadian Model
UK Model

AEP Model
FH-B510/MHC-510

• FH-B510 and MHC-510 are composed of following models. As for the service manual, it is issued for each component models, then, please refer to it.

COMPONENT MODEL NAME FOR FH-B510 and MHC-510

System / Component	FH-B510	MHC-510
Tuner, deck, CD, amplifier	HCD-H51	HCD-H51M
Speaker System	SS-H51	SS-H10

6547 2/12/07/3

6687 2/12/12/5 6688 2/12/16/2

SPECIFICATIONS

Destination	Power requirements	Power consumption
US	120V AC, 60Hz	80W
Canadian		90W
AEP	220 – 230V AC, 50/60Hz	90W
AED		
G		
IT		
EE		
CIS		
UK	240V AC, 50Hz	

• AED: Denmark model
G : Germany model
IT : Italian model
EE : East European model

Dimensions: Approx. 225 x 285 x 265 mm (w/h/d) (8 7/8 x 11 1/4 x 10 1/2 inches) incl. projecting parts and controls

Mass: Approx. 5.5 kg (12 lb 2 oz)

Accessories supplied:
AM loop antenna (1)
Remote commander (1)
Sony SUM-3 (NS) batteries (2)
FM lead antenna (1)
(MHC-510 only)
Speaker cords (2)
(USA and Canadian models only)

Design and specifications subject to change without notice.

Note
This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

MICROFILM

MINI Hi-Fi
COMPONENT SYSTEM
SONY®

6967

PARTS LIST

NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- CND: Canadian model
- AED: Denmark model
- G: Germany model
- IT: Italian model
- EE: East European model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remark
		ACCESSORY & PACKING MATERIALS **********	
	1-466-940-11	COMMANDER, STANDARD (RM-S51)	
	1-501-374-11	ANTENNA, LOOP	
	1-501-594-11	ANTENNA (FM) (MHC-510)	
	1-501-594-21	ANTENNA (FM) (FH-B510: G/IT)	
	1-556-650-00	CORD (SPEAKER) (MHC-510: US/CND)	
	1-690-727-11	CORD (SPEAKER) (MHC-510: AEP/UK)	
	1-575-495-11	CORD (SPEAKER) (FOR SS-H10: UK)	
	2-181-754-01	COVER, BATTERY (FOR RM-S51)	
	3-756-669-21	MANUAL INSTRUCTION (ENGLISH) (FH-B510: AEP, MHC-510: US/CND/UK)	
	3-756-669-41	MANUAL INSTRUCTION (FRENCH/PORTUGUESE/GERMAN/DUTCH) (FH-B510: AEP, MHC-510: AEP/CND)	
	3-756-669-51	MANUAL INSTRUCTION (SPANISH/ITALIAN) (FH-B510: AEP/IT, MHC-510: AEP)	
	3-756-669-61	MANUAL INSTRUCTION (GERMAN) (FH-B510: G)	
	3-756-669-71	MANUAL INSTRUCTION (POLISH/RUSSIAN) (FH-B510: EE/CIS)	
	3-756-669-81	MANUAL INSTRUCTION(SWEDISH/FINNISH/ DANISH) (MHC-510: AED)	
*	4-956-394-01	CUSHION (FOR SS-H10: US/CND/AEP)	
*	4-956-539-01	CUSHION (FOR SS-H51)	
*	4-956-543-01	CUSHION (FOR SS-H10: UK)	
*	4-957-589-01	INDIVIDUAL CARTON (FOR SS-H10: UK)	
*	4-957-590-01	INDIVIDUAL CARTON (MHC-510: AEP)	
*	4-957-591-01	INDIVIDUAL CARTON (FH-B510: AEP/G/IT)	
*	4-958-440-01	INDIVIDUAL CARTON (MHC-510: US/CND)	
*	4-958-441-01	INDIVIDUAL CARTON (FH-B510: EE/CIS)	
*	4-958-213-01	CUSHION (LOWER)	
*	4-958-214-01	CUSHION (UPPER)	

9-957-805-11

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Audio Group

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